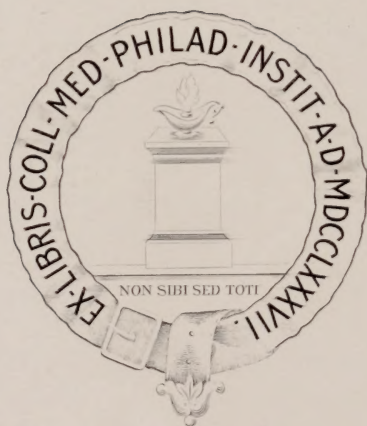



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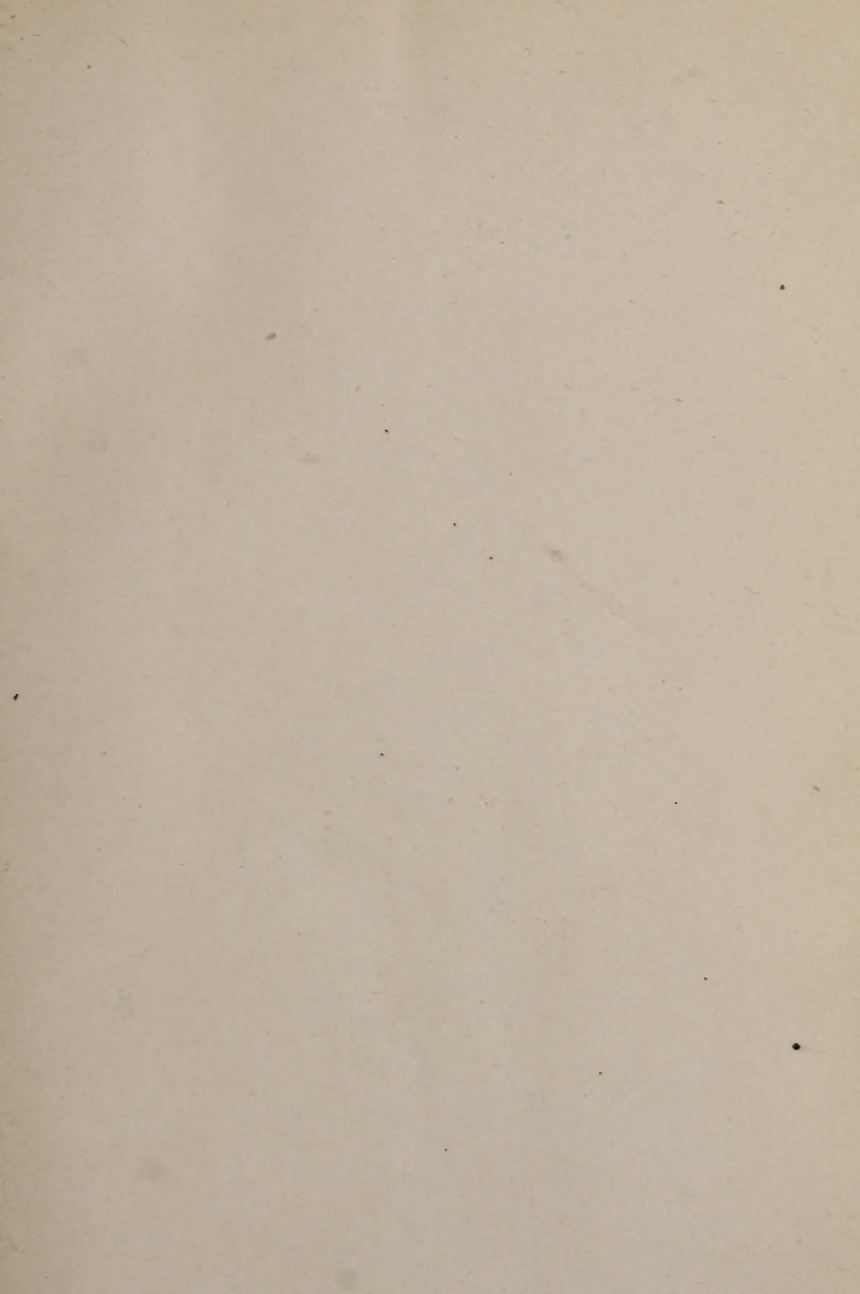
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COURIER OF MEDICINE.

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G. A. TODD, A. M., M. D. AND F. R. FRY, A. M., M. D.

VOLUME XX.



John Hunter

ST. LOUIS, MO.

Published for the MEDICAL JOURNAL AND LIBRARY ASSOCIATION
OF THE MISSISSIPPI VALLEY,

By JAS. H. CHAMBERS & Co., 914 Locust Street.
1888.



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ST. LOUIS COURIER OF MEDICINE.

VOL. XX.

JULY, 1888.

No. 1.

ORIGINAL ARTICLES.

COLOTOMY.

BY N. B. CARSON, M. D., ST. LOUIS.

[*Read before the Mo. State Med. Ass'n, Kansas City, April, 1888.*]

VAN BUREN says: "As a palliative in benign stricture, when life is threatened either by obstruction or by exhausting complications, and as a measure by which rest may be secured for the diseased part and even as a possible cure, colotomy of late years has taken rank as a remedy, the possible value of which cannot be ignored." This quotation, if it had included malignant diseases, as also obstructions from any cause, and incurable ulcers of the rectum and colon, would have applied to the operation as it is regarded to-day.

The object of this paper is to discuss the choice of the two operations, that of opening the bowel in the groin (Littre's operation) or that of opening it in the loin (Callisen's, or Amussat's operation). As my own experience is limited, I shall refer to that of others to help me in the effort to determine which is the better procedure in these unfortunate cases.

Bryant, who favors the lumbar operation, claims to have operated thirty-six times, and in no single case does he regret hav-

ing performed this operation, although in a large number he earnestly wished that he had had an opportunity of performing it earlier, since in no instance, when it was undertaken, did it fail to give relief.

None of the difficulties of the operation are mentioned, and from reading his account of them, one would suppose there were none; but when we come to perform the operation we soon find that all is not as plain sailing as we had been led to expect.

The difficulty in finding the bowel is often great, and in many cases the small intestine has been opened instead of the colon, by the most experienced surgeons. Another danger, and one that is underestimated, is the injury of the peritoneum. Although the operation is supposed to avoid entirely this membrane, it is often the seat of injury, and in many cases the operator remains ignorant of the damage he has done, until the post-mortem reveals the fact. In one of my own cases I opened the peritoneum, but discovered my mistake almost immediately, and closed the opening without any bad results.

Ballance, (St. Thomas Hospital Reports, Vol. XV. N. S) reports a case in which lumbar colotomy was the immediate cause of complete intestinal obstruction; a condition which the operation is supposed to relieve.

Another danger, and one of little less consequence than injury of the peritoneum, is injury to the planes of connective tissues, and the consequent suppuration. This is an accident that is of comparatively frequent occurrence, and if not fatal is the source of much suffering and danger.

Trelat (*Gaz. des Hop. Par.* 1887 li. 1051) gives preference to the lumbar operation. He says: "In spite of its defects inguinal colotomy, being followed either by retraction of the artificial anus, necessitating a reopening, or by an anus which is too large with eversion of the mucous membrane, the fixity of the region, the mobility of the intestine, the density of the wall, permitting us to establish a solid anus." He says further: "We know moreover where to look for the exact point of the colon to be opened in the lumbar colotomy, while in inguinal colotomy we have to search the *S ilvi*, without knowing which

point of the part of the intestine we can fix, and consequently it may happen that we approach too near the cancerous mass, which would be dangerous."

In his eleven cases, Trelat came once in contact with the small intestine with a fatal result. Another time he met with anomalies characterized by a loop of the small intestine adhering to the posterior abdominal wall and superimposed colon which resulted in death. The other nine cases were successful.

Dr. Ball read a paper before the Academy of Medicine in Ireland, May 20, 1887, on colotomy, illustrated by five cases, in three of which the lumbar operation was selected, while in two laparo-colotomy was performed. He advocated the latter operation in the adult as well as in the child: 1st, because it permitted a thorough exploration of the abdominal cavity, which enabled the surgeon in some cases to remove the disease. If this was impracticable, it insured that the opening was made above the seat of obstruction instead of below, as had happened in the lumbar operation. 2nd. The large intestine was found with ease and certainty. 3rd. A complete operation for closure of lower lumen, when considered necessary, could be much more readily and completely carried out, thus making the artificial anus a terminal and not a lateral outlet to the intestine. 4th. A shorter distance of intestine intervened between the opening and the seat of disease. 5th. The abdominal wall being thinner in front, the extent of wounded surface was less, and the finer skin of the front abdominal wall permitted a much more accurate coaptation of skin to serous membrane. 6th. The position of the wound was more convenient for the patient.

The sole advantage of the lumbar operation in ordinary cases was that the peritoneal cavity was not injured. This was not, in his opinion, an important matter. The sole contra-indication to the performance of the laparo-colotomy he considered to be extensive meteorism.

H. W. Allingham, Jr. (*Brit. Med. Jour.*, Oct. 22, 1887), says: "The more I watch the results of lumbar colotomy the more confident I feel that inguinal colotomy is the better operation in the majority of cases, and, I submit, may be performed with greater advantage to the patient." And now that surgery,

through perfect cleanliness, has made such gigantic strides, and the peritoneum is no longer held in awe, as in former days, the opening of that serous cavity, if due care be taken, does not to any great extent increase the danger of the operation, and is certainly not more hurtful to the patient than the disturbances of cellular tissue and parts around, so frequently incurred when there is difficulty in finding the bowel in lumbar colotomy.

Van Buren (Lectures upon Diseases of the Rectum) says: "My own experience is rather in favor of the inguinal opening in the several phases of non-malignant diseases and in the male sex."

The operation in this locality is rather more simple and easier of execution, and has been found to be equally free from danger. The patient is also less dependent upon others in case permanent relief should follow. He can sleep upon his back, which is difficult when wearing a lumbar pad, and the prospect of subsequent closure of the new opening by an operation is rather more promising.

Rochard adds from personal observation that the necessary compression about the waist of the female dress is a practical objection to the opening in the loin.

Prof. Verneuil (*Semaine Med. Par.*, 1885, v. 99) says: "I have for a long time adopted inguinal colotomy and proclaimed its excellence." To Verneuil is undoubtedly due the credit of having brought forward the advantages of the inguinal over the lumbar operation, after it had almost entirely been given up for its more fortunate rival.

My own opinion, although limited to three cases, two lumbar and one inguinal, certainly prejudices me in favor of the latter operation, as being more readily performed, and by far more comfortable for the patient, as he is better able to care for himself than when the lumbar operation has been done. By means of a hard rubber pad or truss which can be better fitted in the groin than on the loin, the patient is enabled to control perfectly the movements of the bowel, which is not the case when the lumbar operation is made.

By drawing a knuckle of the intestine into the opening and resecting the protruding part on a level with the abdominal

opening, a barrier is formed which prevents the passage of the feces downwards, and at the same time enables us to keep the diseased parts clean. Unless the opening into the abdomen is large, there is little if any more danger of prolapse than in the lumbar operation.

The question now presents itself, "Which is the more dangerous of the two operations?"

Dr. W. R. Bull (*Am. Jour. Med. Science*, Oct., 1884) in his tables recites 351 operations. Of these 215 recovered—62 per cent; and 132 died—38 per cent; 4 results unknown. After the various methods the mortality was :

	Operations.	Recovered.	Deaths.
After Amussat's method,	242	165—68 per cent.	77—31.6 per cent.
After Littre's method,	82	38—47 per cent.	43—53.1 per cent.
After Callisen's method,	10	2—20 per cent.	7—70 per cent.
After L method,	4	4—100 per cent.	0

Van Erekitan (*Langenbeck Archiv*, 1879, p. 41) gives 262 cases of colotomy, with 151 recovered—57.6 per cent; 109 deaths—42 per cent.

	Operations.	Recovered.	Died.
After Amussat's method,	165	102—62 per cent.	63—38 per cent.
After Littre's method,	84	45—53 per cent.	39—46.4 per cent.

From these tables it would seem that Amussat's operation had the advantage over Littre's, according to Bull's tables, of 21 per cent, and according to Van Erekitan's tables, of only 9 per cent. Now let us see what has been done since the introduction of antiseptics into surgery, and the improved methods of operating.

Out of 57 cases of colotomy, from all sources collected by me, 53 (93 per cent) recovered, and 4 (7 per cent) died.

	Operations.	Recovered.	Died.
After Amussat's method,	54	21—87.6 per cent.	3—12.6 per cent.
After Littre's method,	44	41—93 per cent.	3—7 per cent.

From these it will be seen that the abdominal opening has the advantage over the lumbar by 86 per cent.

In conclusion I would urge the selection of the Littre operation for the following reasons:

1. It is, when carefully done, not more dangerous than the lumbar operation.

2. We are enabled to determine the exact seat of the disease, and as a result fix the intestine at any desired distance from the seat of the disease.

3. The patient is by far more comfortable from the fact that he is enabled to attend to himself without the aid of others.

4. We are better able with the opening in the groin to fit a pad or truss which controls more perfectly the discharges and with less discomfort than when the lumbar opening is selected.

5. That in this operation we are enabled to make a knuckle in the bowel to prevent a passage downward of the feces without adopting Madelung's method of dividing the bowel across and closing and dropping the lower end.

6. When desirable the artificial anus may be more readily closed in the inguinal than in the lumbar region.

ELECTROLYSIS IN THE TREATMENT OF URETHRAL STRICTURE.

BY JNO. P. BRYSON, M. D., ST. LOUIS.

(Read before the *Missouri State Medical Association*, April 17, 1888).

TO the mind of the writer, urethral stricture means organic urethral stricture. The mere narrowing of the duct, or better still, the loss of its dilatibility would, by this definition, be relegated to the place of a symptom. And so it should be, in strict pathological significance, for the real morbid condition consists of a change in the circum-urethral tissues. It is the development of the fibrous connective tissue in the sub-mucous and spongy tissues around the urethra which constitutes the disease, and the stenosis is the result of the pathological lesion, and not the lesion itself.

Much confusion in speaking and writing, and doubtless much more confusion in thinking, has been caused by this naming of a disease by one of its manifestations or symptoms. Especially is this true in its bearing upon urethral spasm. Anyone who has frequent occasion to explore the urethra of the

average male of North America will quickly come to the conclusion that spasm is a very common state of the surrounding muscular fibres. The *bougie a boule* and the urethrometre of Otis flush whole coveys of spasm daily. Everyone knows that these spasms may have their basis of organic disease in parts far removed from the penis, *ex. gr.*, in a corn on the toe. Here indeed we have the symptom without the disease—the ghost without the substance.

Is it not equally true that we sometimes have the substance without the ghost?

Speaking for myself alone, I do not hesitate to avow my conviction that we do. For instance, when a stricture is cut by a knife (urethrotome) the symptom (narrowing) disappears. The blunt sound, or even the olive shaped bulb, with no ghost to haunt the glimpses of its way, slips up and down the duct. But is the disease cured? By no means. The elastic ring or band opens at the section to let the bulb pass, but closes afterwards and remains as before, infiltrating the tissues and pregnant for mischief.

The sum of this is that we do not by ridding the passage of the obstruction cure the disease, else cutting would be the ideal cure—short, sharp and decisive. But it does not do it, and no one has more sedulously insisted on this fact than the advocates of electrolysis.

Any agency which claims to cure stricture of the urethra, sets for itself the task, first, of causing the absorption of the deposit of adventitious fibrous connective tissue; second, the rehabilitation of the normal urethra and circum-urethral elements, and lastly, the complete or nearly complete restoration of the epithelial lining membrane. The magnitude of this task will be more clearly understood by reference to the following brief outline of the forms of urethral stricture after the excellent French system of classification, chiefly excellent because it has the solid and substantial basis of post-mortem research.

First. Inflammatory stricture, where-in the pathological condition consists of an infiltration of the circum-urethral structures with connective tissue new formation, obliteration of the vascular spaces of the spongy body, fibrous organization of the

exudates, contraction and atrophic condensation of the normal elements. Here the mucous membrane remains normal or nearly so, the lymph channels being still pervious, but the epithelium being piled up, with the surface covered by necrotic cells.

Second. Cicatricial stricture. In this variety we have a true cicatrix, replacing a part of the urethral mucous membrane and sub-mucous tissue lost by ulceration, or from any other cause. The cicatrix may involve a part only, or the whole of the circumference of the duct. Underneath this cicatrix inflammation is playing a part, while its urethral surface is devoid of mucous membrane.

Third. Stricture following traumatic lesions is thus graphically described by Dupley. "On its internal surface there is observed a large cicatrix, ill shapen, traversed by tough, elevated or irregularly arranged ridges, while externally the fibrous mass extends downward to the skin, and ascends on the other hand to the cavernous bodies, a small part of which it involves. The alterations are sometimes so extensive, the contraction of the fibrous tissue so pronounced that a bending and shortening of the penis is the result."—*Int. Enc. Surg.* Vol. VI, p. 457.

Electrolysis or any other method of treatment encounters some special difficulties, that stand directly in the way of cure. I will call attention to some of these obstacles. They are:

First. The extreme density of the new inflammatory growth and its tendency to contract. Any surgeon who cuts through a stricture band in perineal urethrotomy, will at once recognize the fact that he is dividing an unusually dense and resisting mass of exceptional toughness.

The sharpest knife grates and creaks, and in spite of sawing and force, advances slowly and with difficulty. I have several times had occasion to compare this resistance to section in the cases of urethral and rectal strictures, and never failed to note the fact that the urethral offered much the greater difficulty.

Second. The etiological factor in the case of urethral stricture continues to act in a way directly antagonistic to the cure. Mr. Reginald Harrison, in his "Lettsomian Lectures," January of current year, calls attention to the mechanism of stricture building in the following terms.

“By the latter term (chronic granular urethritis) we are to understand that at one or more spots within the urethra, the epithelium has become so damaged, as a consequence of the prolonged inflammation, that it ceases to render the canal urine-tight, and a slow process of escape of some of the constituents of the urine into the tissues comprising the urethra and surrounding it takes place. As a consequence of this and to prevent urine soaking further into the tissues, inflammatory exudation is excited and barriers of lymph, which ultimately become organized, are thrown out opposite the spaces where the leakages take place. Thus splints of plastic tissue are formed corresponding to the spot, or spots, where the epithelium has been so damaged by persistent inflammation as to cease to discharge its normal function. In this strengthening of the urethra, we recognize in the first instance, a conservative action; eventually, however, as in other compensating processes, certain inconveniences follow which constitute, as it were, an independent disease. “The researches of Oberlaender, in the pathology of gleet, are also called attention to in this connection.

It thus becomes clear that electrolysis in gynecology and electrolysis in dermatology are not to be placed, so far as results are concerned, on a parallel with electrolysis in urethral surgery. Clearly the method is not so handicapped in the first two departments of medicine and surgery, as in the last named. Equally clear is it that any true cure of urethral stricture must begin, or end, in a successful effort at rendering the epithelium shield of the duct, urine-tight.

Following this method of thought, I have for some time past, been treating the urethral mucous membrane topically, after, or before, the stricture had been relieved; and, in the case of the female have more freely and confidently advised bladder drainage than formerly. So far as observed the results have been excellent, but a positive announcement would be premature further than to call attention to the matter with a view of getting a trial at the hands of others.

But after what manner does electrolysis propose to cure stricture of the urethra? One electrician of wide experience says (ST. LOUIS COURIER OF MEDICINE, Vol. XVII, No. 1, Jan. 1887).

"When this decomposing agent" [the constant galvanic current] "acts in a moderate degree of intensity, the tissues are not decomposed, but rendered more yielding: so that cicatricial tissue, which is ordinarily unyielding, acquires the property of expanding before a moderate force." Granted; but would this cure the disease stricture? For stricture tissue to become "more yielding" and to "acquire the property of expanding before a moderate force" does not necessarily mean its absorption, nor the return of the atrophically condensed elements, normal to the part, to their original state; nor a reproduction in kind of parts lost by ulceration or any other destructive cause.

More than all else, it does not necessarily mean a restoration of the mucous membrane, if there happen to be any left, to the desired urine-tight condition normal to it; and so long as that is not done, the same condition exists that originally caused the stricture. Strictly interpreted, this would mean simply, a "restoration of calibre," as it is called—in other words, an abolition of a symptom, a very desirable thing to accomplish, but by no means a cure.

As I recollect it, the strictured urethræ of Missourians began to feel the impact of the wave of electrolytic fashion—negative pole, exclusively—about two years and a half ago. Since then I have heard this method of treatment spoken of, as "something new," "one of the advances of modern surgery," and patients began to ask that they be given the benefit of this wonderful discovery. In the *New York Medical Journal*, December, 1871, p. 569, Edward L. Keyes published his results with electrolysis in urethral stricture, ten cases being reported. His verdict is against the method. Van Buren and Keyes in their comprehensive treatise on Genito-Urinary Diseases, published in 1874, say on p. 130, under the caption of "operations on stricture that are to be condemned,"—Time has judged the internal use of caustics and condemned them, while the same fate awaits electrolysis, lately revived. It has been weighed in the balance and found wanting. These expressions come from good observers and competent operators; they date back seventeen and fourteen years, respectively, and even then the method is spoken of as being "lately revived."

Nevertheless in the face of this experience I tried the method in two cases in 1875. In one case, a butcher, æt. 35 years, the stricture was situated near the meatus, at the bottom of a conical depression caused by chancridal ulceration. It was in sight and measured about No. 9. French. He had five seances of about six minutes each—two with the positive, and three with the negative, applied accurately to the stricture. The intervals were four days. Result: quite a lively irritation, some inflammatory action, narrowing (from inflammatory swelling) and disgust of the patient, who went off to another surgeon and got his stricture cut. Nothing daunted, I persuaded a distinguished friend of mine from Iowa to submit. He had a rather wide (about 15 F.) stricture in the bulbous part. He was a free liver, fond of champagne, and frequently suffered thereby. Owing to the irritable condition we concluded, after much debate, to use the negative pole entirely as we made up our minds that anodal was less irritating, than cathodal electrolysis. The intervals were also four days. The intervals were also four days. The strictured part was sensitive, and so the pressure was very light and dainty. I remember, I adopted in this case a suggestion of Dr. A. J. Steele's, and insulated the sound to within a quarter of an inch of its tip, by painting on some collodion.

At first we thought we were getting on famously; a slight pearly gleet came on, which he thought to be dissolved stricture tissue. But we did not seem to be getting through the stricture at all. One day, I don't remember what day, we concluded to use a smaller sound and apply the electricity within the stricture band. This was about the seventh or eighth seance. That afternoon he was attacked with a sharp urethral chill, while out driving with a lady, was carried to his hotel, where I saw him two hours later, with a temperature of 104° , some delirium and great restlessness and anxiety. Dr. Barret had reached him just before and administered morphine hypodermically. He rallied well, stuck to me, but refused any more electrolysis. I afterwards relieved the constriction by intermittent dilatation. He is now married, has children, and told me when I last saw him—18 months ago—that “he kept the No. 19, nickel-plated

poker securely fastened to his fourteen-day office clock, so he would be sure to remember it." He passes it easily, and is as nearly well as strictured mortals ordinarily get.

I then abandoned electrolysis in the treatment of urethral stricture: but within the past year, Dr. Edwin C. Burnett, my associate and clinical assistant, has given the so called recent methods a trial subjecting the procedure to the final test before which all methods must stand or fall—the clinical test. In doing this he has carefully adhered to the method and technique of Newman. The following are the details and results in his own language.

CASE I. September 2, 1886, H. M. Urethral strictures: one just within the meatus; one in pendulous portion, $2\frac{1}{2}$ inches from meatus, and two in the membranous portion. Stricture at meatus admits No. 25 F. Applied the negative pole of a McIntosh battery, using continuous current, increasing in strength from three to five cells for ten minutes. The electrode, which is No. 27 F., passed through the stricture in pendulous portion. Held the electrode against face of this stricture for five minutes, but did not pass through.

September 6. No change in calibre of first stricture, as No. 27 F. met with some resistance. Held electrode on face of second stricture for ten minutes, using current from eight cells; did not get through it.

September 10. Used No. 25 F. electrode, passing down to face of second stricture. After a few minutes resistance, bulb entered the stricture. Continued the application within it for ten minutes, when the bulb passed on to face of the first stricture in the membranous portion.

September 16. Passed bulb down to face of stricture in pendulous portion. Resistance the same. After a few minutes the bulb passed down to face of first stricture in membranous portion, where it was held, with current of eight cells, for ten minutes. The stricture did not yield, as I was careful not to use force, merely letting the instrument rest against the face of the constriction.

September 20. Applied the current as before, for ten minutes. Electrode met with some resistance.

September 26. Stricture at meatus contracting; admits No. 25 F. with difficulty.

Considerable irritability throughout whole urethra. First stricture contracting. Abandoned electricity in this case, concluding that it was of no service in the treatment of real stricture. Whatever gain was made in the calibre of the stricture in this case, was only temporary, continuing only as long as the current was passing and due, no doubt, to the influence which electricity has over spasm.

CASE II.—TRAUMATIC STRICTURE. June 20, Frank D., æt. 18. Had a fall some eight or ten months ago, alighting astride a piece of timber, which ruptured the membranous urethra. Wound healed, leaving a tight contracting stricture at junction of bulbo-membranous urethra, of a calibre No. 4 F. The use of sounds every fourth day, gradually brought it up to No. 24 F., beyond which size it would not yield. Applied No. 24 F. electrode, negative pole, current from eight cells, for ten minutes, against face of stricture. Sound did not pass through.

June 27. Applied same size electrode for ten minutes, eight cells; passed through stricture, but only by employing pressure. No improvement.

July 3. Applied same size electrode for ten minutes. No improvement.

July 10. Electricity for ten minutes; current from five cells; stricture entered with more difficulty.

July 15. Passed No. 24 F. steel sound down to face of stricture, finding that stricture had recontracted. Passed No. 22 F. with about same resistance it had given to No. 24.

July 25. Passed No. 24 F., the number used before electricity was begun; no gain.

August 10. Stricture admits No. 24, as the last time. Advised patient to go to hospital and allow us to operate, but he was on the eve of leaving for Texas, and would not lose the time.

CASE III. August 30, 1887, John K., æt. 56, unmarried.

This patient presented himself at the clinic, complaining of frequency of passing water, both day and night. Examined prostate gland, and finding it enlarged and hard, concluded that

he did not empty the bladder completely. On attempting to pass a catheter to determine whether there was any residual urine I found a stricture which would just admit a filiform bougie, holding it very tightly.

The stricture gradually yielded up to No. 9 F., beyond which it would not go, being resilient in character, and contracting down to above size in the interval of passing of the bougies. There being no tenderness of the urethra, I decided to again try electricity. Gave the patient a séance of from ten to twenty minutes duration once a week, until he received seven, employing a current strong enough for the patient to feel without being painful. At the end of the seven applications, I found no gain in the calibre of the stricture, but on the contrary a recontraction, as the stricture would only admit a No. 7 F.

In the first two cases dilatation followed by cutting had been done, and had failed chiefly because the cutting operation had not been followed by the proper application of the dilatation method. In the last case the stricture was cut by me before the class of the St. Louis Medical College in February of this year, after the electrolysis had failed.

In case I, I had several times cut all the strictures with Otis' instrument, but the patient being in the employ of the national government, could never give the time for the kind of dilatation which should supplement the cutting of extensive strictures, if anything resembling a cure is to be effected.

In case No. II, the traumatic stricture, external perineal urethrotomy had been done by another surgeon before he came under my care.

When case III came before me for operation, finding I could not introduce the urethrotome, I passed Holt's divulsor, and drove down the wedges one after another until the largest size of the instrument was reached; but on withdrawing the instrument I found a blunt sound, No. 30 would not pass. I had failed to spilt the band, thus demonstrating the correctness of Dr. Burnett's observation that it was resilient. I was able however to get in the urethrotome and cut freely on the roof, passing afterward a No. 35 F. with ease. I advised continuous dilatation with catheter after the cutting, but the patient would not keep it up.

On the fourth day he had a No. 35 F., soft bougie passed, and this was followed by a sharp urethral chill, fever and some bronchitis, which put a stop to further instrumentation. I recently cut the stricture again, and dilatation is now in progress.

In all the methods of treating urethral stricture of which I have any knowledge, with the possible exception of the cauterization method of the sixteenth and seventeenth centuries, which has died out from practice (though its revival in full bloom ought not to cause surprise when we consider the modern rage for bric-a-brac) dilatation, either "inflammatory" or "ulcerative," or both combined, "continuous" or "intermittent" plays some part either during the application or subsequent to the application. It seems impossible to separate this, the best of all means of treating the great majority of strictures, from any other methods, new or old, or revivals of old ones, and electrolysis forms no exception.

In the "Reference Handbook of Medical Sciences," article, Electricity, Vol. II., p. 658, Dr. Roswell Park, giving in brief the directions of Newman, says: "The operator must then keep the bougie applied against the thickened tissue, guiding, not pushing, it in the correct line; he will feel it advance, sometimes slowly, sometimes rapidly until the obstruction is passed. It must then be passed on to the next, and so on, until the bladder is gained. It should then be withdrawn carefully, each stricture being reamed out, as it were, on its way out, the current being now slowly reduced to zero. The sitting may last from five to thirty minutes. In three or four weeks it may be repeated. No force should be used. The appearance of a single drop of blood shows that the method is being overdone."

The same directions, if we subtract the electricity and "reaming out," will answer for dilatation of the best sort; and if they are strictly carried out by a competent operator, there will be small wonder that "he (Newman) has been able to prove post-mortem that there may be such perfect absorption and disappearance of all adventitious tissue, that no trace of stricture is left." Seeing that by this method the electrolytic action affects the mucous membrane of the urethra chiefly, it is easy to transform the dilatation into "ulcerative dilatation, just as it is done

by the use of caustics and force, or either one separately. In the case of the use of the negative pole we could easily have here "alkaline cauterization," and there was once a school of surgeons who advocated the use of them on the ground of the softness of the scar-tissue resulting therefrom. But the main point is that it is here impossible to properly carry out the plan without also and at the same time applying dilatation. It would be of great service to pathology also, to have a post-mortem or two on some strictures treated by so excellent a plan of dilatation without the electricity.

Nor is it to be denied that the electricity may be of some service, but if it is of any at all, it is as an aid to dilatation.

So, too, to give other things their dues, we often find that cutting, scarification, etc., will enable us to do the dilatation which could not be effected without them. In the case of cauterization, however, the ultimate results would largely depend on the nature of the stricture. In the case of inflammatory stricture, the mucous membrane remaining healthy or nearly so, any ulceration of it, whether made by great mechanical force, cutting, cautery, either alkaline (anodal) or acid (cathodal) is, under nearly all circumstances highly detrimental. What of mucous membrane is left should be scrupulously protected against injury, in view of the fact that its integrity is the only protection against the increased development of more and harder barriers to the absorption of urine. In the case of cicatricial or traumatic stricture, on whose surface no mucous membrane exists, such action would be of no harm. The stricture-disease could not be cured anyway, hence the abolition or diminution of the obstruction would constitute the chief object of the surgeon.

Dr. Prince says in the article referred to above: "The current acting in a moderate degree causes cicatricial material to acquire the property of expanding before a moderate force. The obvious and sufficient reply to which is, that dilatation, acting in a moderate degree, will do the same thing. How the electrolytic action will, without being accompanied by dilatation, do this, I have not seen stated by those who are so strenuously advocating its superiority over any and all other methods. Not so,

however, are we left in the dark by surgical pathology in the case of dilatation.

When the older surgeons treated urethral stricture by the use of wax bougies in order to destroy "carinosities" which they recognized as the cause of dysuria, they practised dilatation without knowing it; when the modern school of electricians hold a sound against a stricture, which it is made to enter partly, using pressure gently and without force, they employ dilatation (antero-posterior) without giving it credit.

Let us now see what gentle dilatation, intermittent and continuous, but always gentle, can fairly lay claim to do with stricture tissue. Two quotations will serve the purpose sufficiently.

Van Buren and Keyes, *op. cit.*, p. 151: "The first effect is mechanical (stretching) and sedative (quieting muscular spasm at strictural point); this lasts 24 hours. The next effect is reactionary (congestive and spasmodic), resulting in extra tightness of the stricture, and increase of discharge. This lasts from 24 to 48 hours. The final curative effect is absorption. Absorption is excited by the increased activity of the circulation about the stricture, and continues for two or three days or longer, after which contraction and growth of stricture tissue recommence."

Vailemier gave to this series of phenomena the name of inflammatory, as opposed to the ulcerative dilatation. Dupley, in the International Encyclopedia of Surgery, Vol. VI., p. 565, describes the process as follows: "When a foreign body is introduced into the midst of the tissues, it sets up there a series of actions which tend to its elimination. There is at first an irritation, expressed by contracture and spasm, and soon followed by more or less marked relaxation. There follow other phenomena more slow, more continuous and more profound. The blood flows into the vessels, new ones are formed which invade and rarify the tissues, and around the foreign body a pyogenic membrane is organized, which seems to retire before it to make room for the pus which it everywhere secretes. The introduction of a bougie into a stricture, which it fills, without causing laceration, is accompanied by absolutely analogous phenomena.

There is felt at the end of a few minutes a certain difficulty in withdrawing the instrument. Soon the spasm disappears, and movement of the bougie becomes easy again. Afterward a muco-purulent discharge is established in the canal, and one is surprised to find that the stricture permits the passage of a much larger bougie. The enlargement obtained is evidently not the result of the pressure exercised by the bougie, since this was in no wise tightly grasped; it is the result of the inflammation excited in the stricture by the presence of the foreign body."

Now this is no fanciful picture of a visionary mind, but is the simple statement of an observed order of phenomena in their natural sequence. It simply tells what occurs, and does not attempt to account for these occurrences. Anyone who has treated urethral strictures by the method of inflammatory dilatation will quickly recognize its truth to nature.

I may be excused, therefore, seeing that the electrolytic force acts only on the part upon which the bulb or sound makes gentle pressure, lasting from "6 to 20 minutes," and confessedly bringing about the same order of phenomena, so clearly described above, from believing that we have any other aid from that agent than could be obtained from stimulants, irritants or cauteries, alkaline, (anodal,) acid, (cathodal), as they have been used in surgery from the end of the 16th and beginning of the 17th centuries.

Finally, having had and seen results from the use of this same gentle, continuous dilatation, as good as are recorded for the electrolytic treatment; having failed to do with the electrolytic treatment more than could be done by other methods, or even as much, seeing that we can combine the "cutting," or the "cauterizing" methods with this dilatation method at will, and often with the best results to our patients, and above all, seeing that the mere overcoming of the obstruction does not cure the disease, one may be permitted to doubt the high value of electrolysis as a cure for stricture of the urethra, and the more so, since it seems never to be applied independent of the method of dilatation.

INSANITY FROM BRIGHT'S DISEASE.

By L. BREMER, M. D., ST. LOUIS, MO.

[Read before the Missouri State Medical Association, April 1888.]

BRIGHT'S disease as a factor in insanity is by no means a novelty, yet the literature on this subject is, on the whole, rather scanty. Besides, in many of the cases reported the connection between the renal and mental phenomena is not quite clear, and in others it seems hardly justifiable to qualify the manifestations of perverted mentality observed as insanity.

Generally speaking, the insanity of Bright's disease, is that of uremia, and "uremic insanity" would perhaps be a more appropriate term. It is, indeed, generally observed only in the graver or fatal forms of nephritis, acute or chronic, in which the functions of the kidneys are impaired to such a degree that the greater part of the excrementitious substances normally eliminated by these glands is retained.

Instead of the characteristic symptoms of uremia, viz., headache, vomiting and coma, a psychosis, either single or complicated, with one or the other uremic manifestations is set up.

Whether in such cases, it is the retained urea alone that produces the morbid mental states, or whether there are any of the non-excreted leucomaines which are normally formed by the splitting up of the albuminoids, responsible for the disordered brain functions is at present an open question. It is held by some that in the common form of uremia, ammonia, by others¹ the potash salts cause the grave nerve symptoms. However this may be, it is in the highest degree probable that in uremic insanity it is the urea that so peculiarly influences and morbidly affects the highest brain centres, although experimentally it has been demonstrated that this poison when injected into animals whose renal arteries have been ligated, gives rise only to convulsions and stupor.

There is a certain similarity of chemical composition between

¹I. N. Feltz & E. Ritter, *De l'Urémie Expérimentale*, Paris, 1881.

urea and those poisonous albuminoid bodies, the ptomaines, which according to the present state of knowledge are looked upon as being at least in part instrumental in bringing about the delirium and mental aberrations of many of the acute infectious diseases, *e. g.*, typhoid fever, pneumonia, etc. It is true that generally the brain symptoms in those diseases keep in proportion to the rise and fall in the temperature, and that overheating is the principal cause of disordered brain action, but there are cases of febrile disease in which the latter is entirely disproportionate to the moderately high temperature. Such discrepancy is, for instance, not infrequently seen in certain cases of typhoid fever, in which the sensorium is more deeply affected than the fever-curve would warrant.

Such cases are liable to be mistaken for insanity, the typhoid element, owing to the irregular or insignificant elevation of temperature, being overlooked, and it may happen that such patients are sent to an insane asylum. I know of one instance in which the superintendent of a lunatic asylum, being in the first stage of typhoid, with strong predominance of cerebral symptoms, was committed by his assistants to his own institution.

In these cases, as well as in uremic insanity, it is a toxic alkaloid-like principle, a ptomaine in the former, and (probably) urea in the latter, that determines for some unknown reason the preponderance of the mental over the other usual disturbances.

So far, only one case has come under my observation in which a causal connection between an exacerbation of renal disease *i.e.*, accumulation of urea in the blood, and indubitable insanity could be clearly proven.

CASE I.—M. C., a maiden lady, *æt.* thirty-eight, coming of healthy stock, had rheumatism followed by chorea at fourteen. Since this time she has periodically suffered from palpitation of the heart, sleeplessness and general nervousness. Four years ago she fell into ice-cold water, and claims that from that time on her kidneys have been out of order, that she has had to get up at night to urinate three or four times, and that the quantity voided has been very irregular, scanty at times, and excessive at others. Her urine had been examined by several physicians and a more or less considerable amount of albumen had been found. There never was any edema.

The present attack came on after exposure to cold and dampness, the secretion of the urine became exceedingly scanty; after a few days she grew morose and fretful; she did not sleep for several nights, her irritability and restlessness increasing constantly until a week after the exposure she had a maniacal attack. For a day and night she shouted, gesticulated and sang religious songs, beating for hours the time with hands and feet. On the day following she began using obscene language, swore at the members of her family and tore her clothes. This lasted about two days when a period of depression set in, during which she wept a great deal, accused herself of base and mean actions, of having caused the death of her mother, and of having brought utter disgrace and ruin on her family and the whole neighborhood. During this melancholic stage there had been twitchings of the muscles of the face and extremities.

On the ninth day of her disease she attempted to cut her tongue out with a table knife; a copious hemorrhage resulted, which was stopped with a great deal of difficulty after the patient had become almost exsanguinated. She then slept for nine hours uninterruptedly. When she awoke, she was in a dazed condition, but took nourishment freely and gave rational answers to simple questions. In the course of two days her mind became perfectly clear; she remembered dimly some of the events that had taken place, but had absolutely no recollection of her attempt at self mutilation. She made a rapid recovery.

From the third day of her sickness, until some time after her restoration to health I made daily examinations of her urine. In the mean its specific gravity was 1015; it was strongly acid, contained a large quantity of albumen, hyaline and epithelial casts, pus-cells and blood corpuscles in small number. The daily amount of urine voided could not be ascertained during the first nine days of her sickness, the patient passing it most of the time involuntarily, but it was far below the normal. The casts and the albumen, though diminished in amount, could be demonstrated for three weeks after she recovered her senses, when the urine seemed to become perfectly normal. During the maniacal excitement there had been a slight rise of temperature;

after this it had been normal and even sub-normal. Neither vomiting nor headache had been complained of. Pilocarpine, elaterium, and later, digitaline had been administered without any apparent benefit.

I am strongly inclined to believe that the sudden termination of the attack is due to the copious hemorrhage. Some practitioners are still treating uremia, especially when appearing under the form of puerperal eclampsia, with the lancet, and apparently with good results, especially in persons of full habit, and I am of the opinion that in some cases of insanity due to uremia, bleeding is the proper remedy in spite of the fact that such a procedure would not be in harmony with the teachings of modern psychiatry and that very likely it would be branded as a return to antiquated medical barbarism. But it appears to me rational and proper to remove as quickly as possible the retained products of metabolism, a powerful nerve poison, which by its continued action on the nerve centres, renders all remedies worthless.

Cases of real insanity of uremic origin are, on the whole, of rare occurrence; as a rule, the mental disorder consists of elementary deliria accompanied by hallucinations. The following case may serve as a sample:

CASE II. C. B., æt. twenty-six, a plumber, habitual hard drinker, is suddenly taken with what appears to be inflammatory articular rheumatism; feet and ankles are swollen, red and painful; at the same time there is severe pain in the back, the left tonsil, parotid and submaxillary glands are swollen; the gums look inflamed and are extremely turgid; temperature 100°. His legs frequently twitch; whenever he tries to walk there is a convulsive tremor through the whole body and a general spastic condition of all the muscles; he walks on tip-toe, grating the floor with the ball of the foot; cannot bring down the heel; the head is drawn backwards, the spine in a lordotic state. Several times a day he gets "rigid spells," even in bed; there is opisthotonus, his legs and hands are stiff and extended, and he becomes temporarily aphasic. The superficial reflexes (plantar, cremasteric, and abdominal) normal; knee jerk absent; hyperesthesia of epigastric region and of the lower third of thorax. The ex-

amination of the urine, which is scanty at times and copious at others, reveals an enormous amount of albumen, of hyaline and blood casts and renal epithelia in a state of fatty degeneration, or impregnated with blood pigment; the color of the urine is of an intense reddish-brown; it emits a fetid odor and abounds, even when freshly voided, in bacteria, the nature of which, however, was not determined.

His mind wandered, although he could be easily roused to temporary consciousness; he was traveling constantly, driving horses, etc., he had hallucinations of sight and hearing, talked to imaginary persons; could be kept in bed with the greatest difficulty: when interfered with in his attempts to leave the bed, he became violent.

Six leeches were applied to the nape of the neck, and shortly afterwards a general oozing hemorrhage set in; he bled from the gums, the nose and intestines, the leech bites oozed for several days in spite of the efforts to stop the bleeding. His symptoms, however, grew better from day to day; his mind became clear, the tremors and spastic states of the muscles disappeared; the urine was free from albumen and contained only few casts, and he made several successful attempts at walking.

The improvement lasted three weeks when his mind again became clouded. Though his temperature was normal his mind was wandering; he was constantly driving horses, but was always on the wrong road. At times he would be maniacal, try to break things, run off, etc.: the urine contained an increased amount of casts and a greater quantity of albumen: he died in coma eight weeks after the inception of the disease. Diagnosis: acute parenchymatous nephritis. No *post-mortem*.

The clinical picture of this case was in the beginning that of an infectious disease, perhaps rheumatic in origin, and complicated with some other morbid elements of bacterian nature, thus constituting a mixed infection.

I have reported this case at some length because it shows the usual type of mental disorder in uremic conditions, and is of pathogenetic interest in so far as it exemplifies the truth of the assertion that Bright's disease is in its inception frequently a general vascular lesion. The general hemorrhage proved it.

Had this patient recovered from the acute attack, the probability is that the remnant of the disease would have been localized in the kidneys as one or the other form of Bright's disease.

The most insidious of all forms of nephritis and one that frequently remains unrecognized as a cause of mental disturbance, is the shrunken kidney. Being usually chronic in nature from the beginning, the symptoms are often vague and indistinct, and it runs its fatally progressive course under the guise of neurasthenia, neuralgia, etc., until, all at once grave disorder of the mind sets in, and the patient lands in the insane asylum.

Within the last six weeks three cases of this kind were received at the St. Vincent's Institution, of St. Louis, all of which were declared insane by the attending physicians; the urine had not been examined. I believe them of sufficient interest and importance to briefly report them as follows:

CASE III.—Mrs. H., *et.* forty-eight, widow of a physician; of robust build. Early in life, when six or seven years old, she ran a piece of shingle into the right temporal bone, the wound healed and a slight tumor formed at the site of injury, which, about twenty years ago gave rise to attacks of neuralgia. The tumor was removed about fifteen years ago and two splinters were taken out. Fourteen years back she had an attack of puerperal mania, from which she recovered in the course of several weeks. Six years later she suffered from a prolonged attack of rheumatism and intense insomnia. This was followed by an attack of outspoken melancholia lasting several weeks.

Three weeks before her admission to the institution she went through a railroad accident with all of its excitement and exposure. For weeks she had been under great mental strain, owing to business affairs. Several days after the accident she was taken with a tonsillitis; great pain in the limbs, took (as is alleged) an overdose of morphine and choral, and became delirious without fever. She imagined she was on board a ship, saw fish coming towards her and talking to her; had visions of terrible faces and monsters threatening her; voided urine involuntarily, etc.

A few days after admission to the hospital she died of uremic

coma. The urine contained a moderate amount of albumen and great masses of hyaline and epithelial casts and a few pus corpuscles. Diagnosis: shrunken kidney.

Bright's disease had been suspected for a number of years by her husband, who was a physician. The probability is that her previous attacks of genuine insanity were due to the same cause as the last one, namely, to uremia, and it may not be amiss to state at this place that in regard to puerperal mania, I have been twice in a position to corroborate and verify the statement of Scott Doncin, who maintains that there is a renal form of puerperal insanity.

In two cases that came under my observation, albumen and casts could be demonstrated, and the attack diminished in severity, and disappeared together with the renal symptoms.

CASE IV.—Is similar to the preceding one. Mrs. F. S., æt. fifty-five. No heredity. She is brought in a comatose condition to the institution. It is learned that for the last ten years she has been subject to spells of sciatica of great severity. About three weeks before her admission, she was taken with an exceptionally severe one; strong doses of morphine were administered hypodermically, and chloral given to insure sleep for about ten days, when her family began to think that she "talked funny," and that her mind was not quite right. She imagined that she was in a strange place, wanted to go home, although she was in her own room, called for her husband, although he was constantly present, and gave other evidence which showed that she utterly failed to recognize her surroundings. Being very restless and becoming violent she was put on the train under a dose of choral, and shipped to St. Louis. She died in uremic coma about one week after admission to the institution, never having recovered consciousness, although at times she could be roused and recognized her friends. On examination the urine (specific gravity 1030) was found to contain "mucous casts" (so-called), granular casts, epithelial cells in a state of fatty degeneration, pus corpuscles and blood casts.

The interest in this case centres in the fact that the patient had been subject to sciatica. This is frequently one of the signs of shrunken kidney, and so prominent is it that often the original

trouble, *i. e.*, Bright's disease, is entirely overlooked. Among other similar cases I remember that of a St. Louis physician, who died several months ago with the symptoms of uremia. He had for a number of years been subject to occasional attacks of lumbago accompanied by sciatica. During the last of these he dosed himself with morphine to the extent of almost poisoning himself. From this time on grave cerebral symptoms developed, whilst the temperature remained most of the time normal. He became very violent, broke his bed, imagined himself to be on an ocean steamer, etc.

It was thought by the attending physician, that there was some obscure form of brain and spinal disease. He lived in this deranged mental condition about eight weeks from the beginning of the sciatica. After death his brain was found to be slightly edematous, corresponding to the usual pathological condition of that organ in uremia. Unfortunately the kidneys were not examined in this case, but in the light of my recent experience, I am morally certain that the urine as well as the kidneys would have revealed the true state of affairs.

CASE V.—L., an alcoholic of long standing, became suddenly insane after the opening of an intra-muscular abscess situated about one and a half inches below the apex of the heart. He is admitted to the St. Vincent's on a certificate of insanity. There is cirrhosis of the liver, ascites and considerable exudation into the pleural cavity. His urine is loaded with albumen, hyaline and epithelial casts, renal epithelia. Few pus corpuscles. He has ideas of persecution, believes that the attendants in the institution are after his money; that robbers are in the house, and he continually attempts to bar the door of his room to keep them out, etc. At the hospital whence he came, he had become unmanageable. No fever. Death from coma. No *post-mortem*.

For the sake of completeness, I will briefly mention two cases which I had of late an opportunity of observing at the City Hospital of this city.

CASE VI.—A negro, about thirty-five years of age, an alcoholic and epileptic, had been time and again, at varying intervals, in the hospital for treatment of his epileptic seizures. It was

known that he had Bright's disease. During the last six months he had no epileptic attack. He was brought into the hospital in a stuporous condition, from which he could not be roused. He remained in this state for several days when, suddenly, one night he became unmanageable, tried to break the furniture, made speeches, declaring that he was a free born American citizen, entitled to all the privileges of such, that he could whip any man in town, etc.; in short, he was a typical maniac. No fever. About one week after admission he died comatose. *post mortem* revealed as principal lesions, cirrhosis of liver and kidneys.

CASE VII.—S., a colored woman, æt. fifty, had been admitted to the City Hospital without a history, about one week previous to my examination; she was aphasic, could not pronounce a word, nor understand the meaning of one, whether there was word-blindness or agraphia could not be made out, since the patient was illiterate. On being asked her name she invariably answered Til-lil-lil-lil. This was the only verbal expression that could be elicited to any question proposed. She had to be spoken to several times before she would try to answer. She was silly and had a giggling laugh without motive. No paralysis on right side. Temperature 97°. Urine, specific gravity 1015. Pupils contracted and sluggish of reaction: urine and feces were passed involuntarily: slight tremor at times in hands and feet; casts hyaline and epithelial, pus corpuscles, albumen: hypertrophy of left heart. A few days later she became more attentive, could pronounce her name (Martha Smith) though with difficulty, execute simple movements with her hands when told to do so, and gave other evidences of returning intelligence. It was now quite clear that she was suffering with motor aphasia since she became impatient and irritated or laughed at herself whenever she tried to pronounce a word without success; after she had mastered the pronunciation of a word, she would repeat it several times; understood questions better. A few days later a hemiparesis of the right side supervened which did not last very long, however. Finally she got well enough to help about the ward, which she did willingly. But the improvement did not last very long; she became destructive, uttered threats, and

seemed to have homicidal tendencies; everything she could get hold of she would throw into the water-closet, etc. She was then transferred to the City Insane Asylum.

Remarks.—There is no doubt as to the existence of renal affection in all the cases reported above, nor can there be any question as to the cause of the mental derangement observed in these patients, although there was in none of them the usually observed symptom grouping of uremia, etc., viz., headache, vomiting and convulsions. The absence seems in a measure to be characteristic of uremic insanity, and reminds one of the psychical equivalent of the epileptic attack.

It might be questioned whether the morbid mental manifestations in all the cases detailed above can be legitimately classed with insanity. There is in a majority of them a close resemblance to the delirium of alcoholic intoxication. With the exception of cases one and seven, this delirium is of an elementary character, and only in case five (barring C. I., which is one of unequivocal insanity) is there a feeble attempt at systematization of ideas begotten by delirium. Most doubtful is case six, owing to the complication of alcoholism and possibly idiopathic epilepsy.

But although nobody would classify the drunken man, or him that has an attack of delirium tremens with the insane, we know that etiologically, though not ontologically, there is such a thing as alcoholic insanity, as there is one from the continued abuse of drugs, morphine, hasheesh and cocaine for instance. Urea retained for a longer period in the blood seems to act in a manner similar to these substances, on the highest brain-centres, producing perversion of thought, feeling and action; and the absence of fever and a degree of chronicity of the mental change will warrant the application of the term insanity to such cases.

But as in alcoholic or the other intoxication insanities, so in the uremic variety, there is no type; it may give rise to all kinds of mental abnormalities, from the most expansive forms down to imbecility.

That there must be a predisposition to mental disorder in the individuals mentally affected by uremia, would seem to be a postulate of common logic, and it might be justly claimed that

as in ordinary cases of insanity there must be in the uremic kind, in addition to the exciting cause, a remote one, which is of much greater pathogenetic importance, namely, heredity or acquired predisposition. With the exception of case III, which looks suspicious on account of the injury of the head, and case I (chorea), no predisposition or heredity could be made out. (Owing to the absence of any record whatsoever the cases VI and VII, are not counted.)

Yet, judging from common experience, in matters of insanity, and taking into consideration the, on the whole, deficient histories that were given, and the well-known tendency on the part of the relatives to deny insanity in the family, I am inclined to believe that my patients, if their and their families' histories had been known, would have been found to be tainted; at all events, considering the different effect on different individuals of the same poison, there must be a preponderance of the insane over the convulsive temperament. Even the alcoholic intoxication, the prototype of toxic insanities, demonstrates clearly the different modes in which different persons are affected according to their individual organizations and idiosyncrasies. One becomes maniacal, another melancholic, a third has convulsions, and a fourth one is at once rendered stuporous and even unconscious.

Besides these resemblances to the alcoholic delirium, the uremic attacks reminded me often of post-epileptic insanity, even in those cases that were free from convulsions.

As regards the aphasia and transitory hemiparesis in case VII, there is a possibility of holding the uremia alone responsible for such disturbance, although there is a probability that it was produced by a coarse lesion, viz, circumscribed hemorrhage or thrombosis, the result of general vascular disease, such as is common in Bright's disease.

Brieger (Klin. Beob. Charité Annalen, 1882, p. 237) saw a case of uremia in which there were convulsions followed by a psychosis lasting eighteen hours. Amnesic aphasia terminated the attack. The patient got well.

I did not propose to write an exhaustive treatise on insanity from Bright's disease, and consequently refrain from enumerat-

ing and reviewing the literature on the subject. My purpose in publishing those cases that came under my observation was to urge the necessity of examining the urine of such patients as become suddenly insane; especially when the insanity partakes of a delirious nature, and when alcoholism is to be excluded. I think that many a case of uremia has been put down as mania, without the correct diagnosis as to the cause having been made.

An exclusively chemical test is, of course, not sufficient. Albuminuria is not Bright's disease. With the microscope alone rests the final decision. That even this instrument fails in some cases for a time to reveal the true state of affairs, notably in contracted kidney, is too well known to require discussion.

From a therapeutical point of view the importance of an early diagnosis is obvious. A timely regulation of the diet may turn the scales of the balance in favor of recovery, at least in the more acute forms of the disease.

From the clinical course of cases I and II, I consider myself justified in concluding that in certain cases such incisive measure as blood-letting is indicated. That here the strictest individualization is required is self-evident.

Again, in case of death, it is of great import to the family to know, of what form of insanity their relative died. As regards the social and business status, and record of such a family in the community, it makes a very great difference whether the death-certificate reads: "Mania," or whether the cause of death is given as "uremia."

Finally, a correct diagnosis will sometimes keep a patient out of an insane asylum, and will cause him to be treated at home on the same grounds as a delirious typhoid-fever patient receives home—or general hospital—but not an asylum-treatment.

This remark does not imply that all patients suffering from uremic insanity ought to be treated outside an asylum.

SACHARIN.—The medical uses of this agent are few, but it will be found of value dietetically in cases where cane-sugar is to be avoided, as in diabetis mellitus, corpulence, dyspepsia and in hepatic and gouty affections generally. In pharmacy also it will have important uses since its aqueous solutions do not ferment.

SOME PRACTICAL POINTS IN RAILROAD SURGERY.

BY WILLIS P. KING, M.D., SEDALIA, MO.

[*Read before the Mo. State Medical Ass'n, Tuesday, April 17, 1888.*]

I DO not know that I need apologize for using the term "Railroad Surgery," since the president of this association appointed me as chairman of this sub-section. Yet there are those who object to the use of the term, contending that surgery is surgery, that a wound is a wound, no matter how produced, and that all wounds are subject to the same treatment and management, that treatment and management varying only with the situation, character and degree of the injury. I admit the justice of the criticism to a certain extent, and yet the term is being constantly used by the profession; state associations and other medical bodies appoint committees on "Railroad Surgery" so that it is rapidly becoming as distinctive a branch of the art of surgery as that of "Military Surgery."

When reference is made to it, it is fair to assume that it is meant to cover that class of serious and crushing injuries, such as are made by large and ponderous machinery in motion, the engine, the moving train, the machinery in shops driven and kept in motion by the powerful and ponderous driving wheel. Accidents caused by this class of machinery send to us everything, from a slight abrasion, or the loss of a nail up to a fracture simple, compound, comminuted and complicated of the extremities, of the spine and skull, and injuries of the viscera and of the thorax, abdomen and pelvis. Many of these injuries are of such a nature as are rarely produced in other ways than in the operation of railroads.

In presenting a few "practical points" on this subject, which are the result of many years work in this particular field, I desire to say at the outset that there is no department of surgery in which the application of antiseptics is more necessary, nor where better results are secured, comparatively speaking, than here.

With crushing, bruising, grinding and laceration of the soft

parts, the breaking of the integument, the tearing of the connective tissue, the destruction in part or in whole of the circulation, and the benumbing of the local nerve supply, with dirt, grease, coal dust and other foreign substances ground into the wound, the foundation for blood poisoning is laid in almost every case.

Such a field cannot be cleansed with the simple act of washing. It must be made antiseptically pure by bringing in contact with every shred of the contused and lacerated mass some substance that is capable of destroying everything in the nature of an organic germ that may be present anywhere about the wound.

This chemical cleansing hastens the separation of the living from the dead ; totally checks or greatly limits the process of suppuration, thereby preventing much pain, freeing the injured person from fever, and, when thoroughly done, renders him entirely safe from the danger of septicemia.

There is no doubt in my mind that the greatest danger of blood poisoning is immediately or soon after an injury is inflicted.

When the tissues are rent and torn, and a thousand avenues are open for the entrance of all forms of germ life is the time of greatest danger, and this is the time when the surgeon should exercise the greatest care. After a few days, when nature has had sufficient time to recover from the shock, she closes the doors against all intruders, and so far as she is able, raises a wall of protection against the enemy. I do not mean to say that we should ever be negligent in regard to the matter of cleanliness in wounds, but we should be doubly diligent immediately after an injury has been inflicted.

PAIN IN LACERATED WOUNDS.

My attention has often been called to the unusual painfulness of lacerated wounds. This has been more especially marked where there was necrosis of the soft parts, where there was death and sloughing of the tissues deprived of their circulation by the character of the injury. I was at a loss to account for the unusual amount of pain compared with other wounds, until I noticed that when the sloughing process was over and the dead was separated from the living, the pain ceased.

With this "pointer" from nature I began in all such cases, to remove the sloughing tissues as soon as the line of demarcation was well defined. I have found that by thus anticipating nature, I have been enabled in a great many cases, to save the injured person much pain. I cannot explain it, but there is something about the contact of the dead and dying with the living that gives rise to much pain. The pain is in the living of course. It may be caused by the effort to separate and throw off the dying, or it may be that tissue which is dead or dying may act as a foreign body, or as a chemical irritant. Whatever may be the cause of the pain, the fact remains that the patient may be saved from much pain by the cutting away of the dead and dying as soon as we know where to cut. This may not be new to many here; but it is a matter that I do not remember to have ever seen in any work on surgery, nor to have ever heard in a lecture, so that it is fair to presume that it will be new to some of you.

AMPUTATIONS.

It is an easy thing to make an amputation. Almost anybody can do it, after a fashion; but to do it right, to remove the part which has been rendered useless by violence in such a way as to insure safety to the injured person, and, at the same time save him a useful stump, a stump to which may be adapted a useful artificial limb that may be worn without pain or serious inconvenience, requires thought, experience, skill.

The question also often arises whether to amputate or not. Under the old method surgeons were often forced to answer this question in the affirmative, because they knew from the nature and character of the injury that they could not save the limb. Experience taught them that, with certain injuries, if amputation was not done, they would be sure to have suppuration, septicemia, fever, death. But we are not forced into any such hasty action under the use of antiseptics, for we can wait and keep an injured limb in a reasonably good condition (if the circulation be not entirely cut off) for an indefinite period and still have no fear of blood poisoning. If the limb below the site of injury is still warm, and if the structures at the site of injury are

not wholly destroyed, we can wait. Nature is wonderful in her reconstructive power, if she is not deprived of material with which to do her work.

When we decide to amputate, the question of first consideration is, how can we give the patient the best possible stump for future usefulness? This applies more particularly to the lower extremities.

This may be done:

First, by the kind of flaps made.

Second, by operating under conditions that will give reasonable assurance of "union by the first intention."

The one thing to be avoided is that of having cicatricial tissue in the end of stump. Cicatricial tissue is granulation tissue covered with a thin film of connective tissue. It is a low and degraded tissue, is never well supplied with blood, and therefore breaks down easily and becomes sore under pressure. This necessitates the laying aside of the artificial limb and the resumption of the crutches for a time. Cicatricial tissue also has within it sensitive and painful nerves.

These difficulties may be met and overcome in most instances,

First, by having the line of union elsewhere than on the end of the stump.

Second, by securing union by the first intention and thereby having no cicatricial tissue, no breaking down, no painful nerves bound up in an indurated cicatrix.

As is well known to you, a great number of the amputations that must be made in the lower extremities must be made between the ankle and knee, and also a majority of the injuries are in front, so that we, as a rule, have a greater field posteriorly from which to select a flap than we have anteriorly.

For amputations in the middle and upper thirds of the leg I have recently made a flap which is a modification of Teale's, which, I think, is the best that can be made. It is a long posterior flap—indeed, it is all posterior flap, for the tissues anteriorly are removed for one or two inches above the point at which the bone is sawed through. When the flap is trimmed and made to fit and the parts brought together, the line of union is thrown above and on the sides (see fig. 2). I think this

is a better flap than Teale's for amputations that must be made in the middle and upper thirds of the leg.

To operate under conditions that will give reasonable assurance of union by the first intention is,

First, to go as far away as possible from the point of injury.

Second, To always operate under the strictest antiseptic precautions.

Third, To do secondary amputations whenever it is possible to do so. Every surgeon who has had to deal with railroad injuries knows that when a car wheel passes over a limb, in addition to the serious injury inflicted at the point over which the wheel has passed, there is an extension of the injury far beyond that point. We will say that the wheel has passed over the ankle joint. It will be found that the connective tissue has been torn for some distance up the limb: there will be ruptured blood vessels with effusion of blood, so that the limb will be "black and blue" for some distance beyond the actual site of injury, and there must be in the very nature of things serious injury inflicted on the local nerves supplying the part. When we cut into these tissues for the purpose of making an amputation we find the integument loosened, the connective tissue torn and blood clots in many places. Now, to make an amputation through tissues so injured is not to do so with the confident assurance of securing union by the first intention. In going higher up we must often sacrifice so much of the limb as to seriously impair its future usefulness. The question naturally arises here, would it not be better to wait, to roughly lop off the part beyond the injury, secure bleeding vessels, antisepticize the wound, dress antiseptically and wait for nature to prepare the parts for amputation? Then wait until the normal condition of the local nerve supply has been re-established, until the effused blood has been absorbed and the ecchymosis disappears, and then select the best site and make the amputation under conditions that will reasonably insure union by the first intention.

I know that I will be met with opposition here. It will be said that we have no right to put the life of an injured person in jeopardy twice when all that is to be done may be done at one operation. I am not so sure that we jeopardize the life of the patient by the line of action proposed.

With the dead and dying entirely removed, and that which remains put beyond the danger of suppuration, of inflammation, or sepsis by the treatment applied, there is no reason in saying that we doubly jeopardize the patient's life. I believe that the mode of procedure in the future, in such cases as I am now considering, will be to cut away the dead immediately after the injury is inflicted, antisepticize and wait, wait until the parts through which we must amputate, have practically returned to their normally healthy condition, so that we may reasonably expect union by the first intention and thereby secure stumps without granulation tissue, covered with a friable film which must pass muster and do duty for integument, and which breaks down and becomes an ulcer upon very slight provocation.

These are considerations of great weight to those who must limp through life and obtain a living by the sweat of their brow whether they have a good stump or a bad one.

It is a question of first importance to a cripple to know if he must limp, whether he shall limp with pain or without it.

I will not say that by the use of antiseptics we have not had good results under ordinary circumstances in primary operation, for we have had, but in secondary operations the results have been uniformly good, the very best that could be expected under any circumstances.

I would present a few cases, illustrative of the position above taken with photographs showing results.

CASE I. J. J. Schupp (fig. 1) American, aged 28, brakeman on M. K. and T. Division of Mo. P. Railway, was injured on Oct. 31, 1886 by breaking of stirrup to ladder on freight car, letting his foot in between car wheel and brake-shoe where it was crushed through instep. The amputation was made through the tarso-metatarsal junction, and in addition portions of some of the tarsal bones were removed with the saw. The posterior flap being much bruised did not do well, a large part of it sloughing away. The parts were treated antiseptically and left to heal by granulation. After six months there was still an irregular point as large as a silver dollar still unhealed, and was discharging a greasy serum which indicated degenera-

tion of bone. Upon investigation it was found that the *os calcis* was carious. I decided to make a sub-astragaloid disarticulation of the foot, de Lignorelles' operation.



Fig. 1.

This was done with the result seen in fig. 1. The flaps healed by first intention, and the cicatrix is anterior and above, so that there is no pressure on the cicatrix whatever when he walks. He has a shoe with steel braces up the sides of his legs, and walks with very little lameness and without pain.



Fig. 2.

CASE II. M. F. McClintock, yard master at Nevada Mo, was knocked down and had a car wheel run over his left ankle on Dec. 9, 1887. The circulation in the foot was not entirely destroyed, so that we decided to wait. The wound was quite extensive on both sides of joint, and the ankle joint was opened. The wound was thoroughly cleansed with antiseptic washes, dressed antiseptically and put in a good position for rest. After three weeks, during which time the foot was inspected and dressed every

three or four days, we decided that the foot could not be saved. At this time it was found that the effused blood in the leg had been absorbed and the leg had a normal and healthy appearance. The operation heretofore mentioned (long posterior flap) was made, and union by first intention was obtained practically without fever, pain, or any constitutional disturbance except that which was caused by the ether. The result with the locality of the line of union is seen in fig. 2.

CASE. III. Ed. M. Conrad, American, aged 22, brakeman, fell from train on K. N. and D. Division on April 15, 1887, both legs being run over by a number of cars. He was taken to Topeka, Kansas, and both legs amputated on the same day.

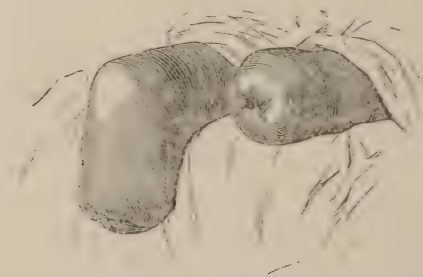


Fig. 3.

The right leg was removed by antero-posterior flap in the upper part of middle third; the left was disarticulated at knee joint (Stephen Smith's operation). He was received into Sedalia Hospital on May 8, twenty-three days after the injury. It was found upon examination that all the flaps had sloughed away, leaving the ends of bones to be covered by granulations.

After eight months watching and attention to these limbs there was a large irregular space on the ends of both stumps which was not healed, and it was apparent that it would never heal so that he could wear artificial limbs, as there was so much cicatricial tissue in both stumps that as he must bear his weight equally on both limbs and could favor neither he would always have sore stumps, and the wearing of artificial limbs would be

impossible. We made amputations in both at different times (both operations being done by my first House Surgeon, Dr. Edwin F. Yancey) with the result seen in fig. 3.

In both of these operations the cicatrix was cut out, and the skin and other tissues dissected back and the ends of the bones sawed off so that the flaps were brought together without tension. He suffered no inconvenience in either case except from the ether. There is not a particle of cicatricial tissue in either stump, and he is now wearing artificial limbs without pain, and is enabled to go upstairs and get on and off street cars, using only a cane with which to steady himself.

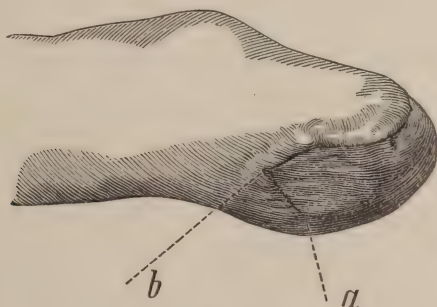


Fig. 4.

CASE IV. B. F. Young, American, æt. 25, engineer. Was caught under a derailed engine and held fast for 30 minutes, while boiling water was pouring over his left leg and foot, from some part of the engine which had been broken. This was Jan. 30, 1887, and he was admitted to the hospital the same day. It was found that there was a deep and extensive scald, embracing the foot and the anterior surface of the leg over the lower and middle thirds. The soft parts were literally cooked, so that after a few days we cut away the superficial veins above and below and threw them away, as so many impervious strings. It was plain to be seen that this leg could not be saved so as to make a useful limb. Amputation was proposed and declined, and the limb was kept under treatment for eight months. The anterior surface of the tibia for six inches in length was ex-

posed, eroded and black. After about eight months Mr. Y. became satisfied that he could never use the limb. The amputation was made at a point a little below the junction of the middle and upper thirds. The flap made in case II was adopted, excepting that it was modified to some extent on account of the cicatrix anteriorly and the fact that a posterior flap of sufficient length could not be obtained on account of the extension of the burn to the posterior part of the leg some distance above the ankle. In the wood-cut "a" shows where the posterior flap was doubled on itself and "b" the extreme point to which this flap was brought in front.

We had union by the first intention in this case, and Mr. Y. is now wearing an artificial limb without pain, and is running a passenger switch engine in the Kansas City Yards, and gets on and off his engine, he informs me, without trouble or pain.

OPERATIONS ABOUT THE FEET.

In operations about the the feet it is often a question as to what amputation shall be made in order to give the patient the best possible limb so as to enable him to walk reasonably well afterward. Of course it is best, as a general rule, to sacrifice as little of the foot as possible, so that in crushing injuries about the toes it is best to sacrifice the toes alone if it can be done. When we must go beyond the metatarso-phalangeal junction, the next point of selection is at the junction of the tarsal with the metatarsal bones where Chopart's and Hey's operations are usually performed. It has been my experience that there is one difficulty which obtains after these operations and that is the tendency of the heel to draw up, so as to throw the weight of the body on the cicatrix. This is caused by the fact that the tendons of the anterior muscles are severed in the operation and the *gastrocnemius* and *soleus* having nothing to antagonize them get into a state of tonic contraction or become *contractured*, as Dr. Sayre put it, and so draw the heel upward.

It has occurred to me that in these operations the tendons (being as a general thing not injured so badly as the other tissues) might be cut *long* and carried over the ends of the tarsal bones and fastened by stitches under the posterior flap. I throw

out this suggestion for what it is worth, as nothing is impossible in modern surgery. If they could be so fastened and made to *live*, the muscles to which they belong would certainly continue to antagonize the posterior muscles and so remedy the difficulty.

When we get beyond the tarso-metatarsal junction, we must do either Syme's, Pirogoff's or de Lignerolles' operation, or some modification of these, or go above and make the amputation in the leg.

When it is practicable I prefer the *subastragaloid disarticulation* of de Lignerolles. It makes a pretty stump, the ankle joint is preserved, the cicatrix is not on the end, and the patient has the old, hard integument of the heel to walk upon. Any good work on surgery will give to those not familiar with this operation all of the details as to how to perform it. In removing the *os calcis* I use strong, straight scissors on the sides and curved scissors on the posterior portion, which facilitates matters very much and renders its removal much less difficult. If the points are kept close to the bone there is very little danger of cutting important blood vessels.

Case I is an illustration of the result after this operation. In the recital of this case I forgot to say that in removing the *os calcis* it was found to have been fractured, and the whole bone was in a state of caries.

CASE V. Walter Roseberry, æt. 26, brakeman on K. & A. Div., admitted Nov. 16, 1887, having been injured the night before. Eighteen cars had passed over him, and it was presumed from the position in which he was found, that they had all passed over the instep of both feet. The feet, from the instep down were ground into mince meat.

The operation instituted by de Lignerolles, and popularized in 1846 by Malgaigne, was performed on both feet, Dr. E. F. Yancey amputating the left and I the right. We were compelled, on account of the extensive lacerations about the upper part of the foot anteriorly and about the ankle joint laterally, to use lacerated integument in the flaps. Union by first intention was obtained nearly throughout in both operations. All of the cicatricial tissue in either is shown in the wood-cut.

The points at which the greatest pressure will come are covered by the old, hard integument of the heel. He writes me that he

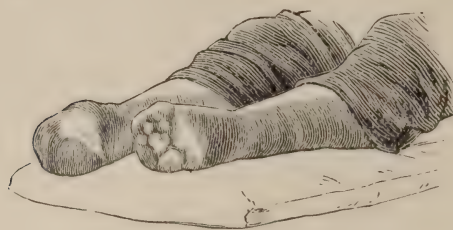


Fig. 5.

can walk on these naked stumps by using crutches. He is now in St. Louis having artificial limbs adapted with every hope of soon being able to walk quite well with the use of a single cane.

THE TREATMENT OF FEVER BY THE ICE COIL.

BY GEO. N. KREIDER, A. B., M. D., SPRINGFIELD, ILL.

[*Read at the Meeting of the District Medical Society of Central Illinois, Pana, April 24, 1888.*]

FOR some time I have contemplated writing upon my experience with the ice coil in the treatment of fever, but hesitated about selecting this subject for the present meeting, because I believed it desirable to have my favorable statements confirmed by a greater array of cases. I acknowledge in advance that I will not be able to present in this paper that proof of the value of the treatment which would be desirable. But the opportunities in private practice for making a thorough test of any line of treatment are so unlikely to occur, and my experience with this method has been so encouraging that I am tempted to break through the conservative rule which should

usually govern us, and report my results even though they may not amount to a demonstration. I only hope so to present the facts that others may be induced to give the method a trial, and thus, by a combination of future experiences, be able to prove the truth of the principles which will be laid down to-day.

A prominent member of our profession, writing on the subject of fever in one of the latest and best cyclopedias, begins the article by the statement that not enough is known of the febrile process to make a definition of it possible. Even a description of it is difficult to give, considering the great variety of its forms and the difference of its degrees. I acknowledge myself as unable to define fever as this writer, but fortunately for us a definition of our subject is at this time unnecessary. Clinically, we have a good idea of what fever is. We know that it is the most frequent manifestation of disease, and is associated with those maladies which cause the largest number of deaths. We are all aware that our energies are most frequently directed toward combating fever or its results, and that nothing so taxes our resources as its treatment.

Notwithstanding our inability to define fever correctly, it is now almost universally conceded that all diseases called fevers are caused by the invasion and growth of micro-organisms, or by the ptomaines generated by them. With this concession the significance of the term is greatly broadened. Tuberculosis, pneumonia, erysipelas, etc., are no longer to be considered as obscure disease entities, but as species of fever caused by micro-organisms and having local manifestations. I am satisfied that the time has already arrived to simplify our classification of fevers. When our diagnosis can be accurately determined by the microscope, we will have no more cause for wrangling because this or that symptom is present or absent in a particular case of fevers. This advance in our knowledge of the febrile state can be easily traced back to Pasteur, who discovered the principles of fermentation, and to Lister who applied them in surgical practice, and found that suppuration and the accompanying fever were caused by germs introduced from without, instead of being a humor of the blood which sought this means of

exit, as was formerly taught. The interesting and successful means of cultivating and studying these germs first devised by Koch has enabled us to know the conditions which favor or hinder the growth of these micro-organisms. It has been found that very slight differences of heat or cold, of acidity or alkalinity, of light and of air determine the rapidity of growth of the germs. Some of the most interesting studies of this character have been made by our countryman, Sternberg, who has investigated the degree of heat which is necessary to destroy the germs causing the various febrile diseases. The thermal death point of the typhoid bacillus he found to be 132.8° F., tubercle bacillus in fresh sputum, 212° , pneumococcus, 136.4° , streptococcus of erysipelas, 129.2° . It seems, probable, therefore, that the body temperature of from 100 to 106° , usually found in fever, is not calculated to destroy the germs, but is the most favorable for their growth. Whether this last statement be true or not, it is positively demonstrated that in the vast majority of cases the elevation of the bodily temperature in fever above 102° has a tendency to hinder or destroy the action of the vital organs. Liebermeister says that by far the greater number of those who succumb to (typhoid) fever die from the effect directly or indirectly of the fever heat. The true danger consists in the deleterious influence of a high temperature on the tissues by means of which necrobiosis is brought about, manifesting itself anatomically as parenchymatous degeneration. The physician's task is to prevent the dangerous consequences of an elevated temperature by controlling the fever before these dangerous consequences have occurred.

Pyrexia at this time is treated either by drugs or by the application of cold to the surface of the body. The drugs used for this purpose may be divided into two classes. First, those which seemingly dilate the arterioles, and, therefore, favor cutaneous circulation and consequent cooling of the blood. Aconite is an example of this class. Second, those drugs which seemingly act on the nervous centres and influence the temperature through them. Antipyrin and quinia are examples of this class. I say seemingly because it is possible that the action of these drugs is thus wrongly defined, and at any rate it appears

that the two classes have much of their action in common. It is now well established, however, that the use of any of these drugs alone in a continued fever is not good practice. I believe that in case a continued fever does not yield to antipyretic medicines after the faithful use of them for a week their routine use should be abandoned, and they should only be used as an adjunct to some other means of reducing the temperature, and only then when the temperature reaches a high point or persists for an unusual time.

I now come to consider the treatment of fever by the application of cold to the surface of the body. Cold applications, that is to say, cold baths, packs, sponging and the ice coil, carry out the curative effects of the drugs mentioned above in the best possible manner, in that they both cause a dilatation of the arterioles and cool the blood as it passes through them, and also act on the nervous centres by reason of the action of the cold on the peripheral nerves. I will speak to-day of the application of cold by means of the ice coil, but I do not detract from nor advise against the use of the bath, pack or sponging. On the contrary, I believe them extremely valuable means of reducing fever, and find it occasionally necessary to use them in my practice, either alone or in conjunction with the ice coil. I believe that the abstraction of the heat of fever by means of external cold is one of the most rational procedures in our armamentarium. The great question is how can we best apply the cold. By means of the cold bath the mortality from typhoid fever in the German hospitals has been greatly reduced. It has gone from 27 per cent to 8 per cent in Basle, and from 15 per cent to 3 per cent in Kiel. Leroy Méricourt, in the Hospital Society of Paris, recently stated that statistics of over 20,000 cases treated by different physicians and in different cities showed a mortality of only 4 per cent by the cold bath treatment. Prof. Liebermeister says that by this treatment the appearance of the typhoid patient has entirely changed, and the old picture of typhoid is rarely seen. That fever has lost a great deal of its terrors, and the patients and friends demand the cold bath treatment in preference to any other in those cities where the efficiency of the bath has been proved. The success of the cold

water bath treatment in the hands of careful and conscientious observers has been such that I would be one of its most earnest advocates, did I not believe that in the ice coil we have an efficient substitute. The ice coil is easily constructed, applied and regulated. It is more agreeable to, and disturbs the patient less than the bath or sponging. The relatives and friends consent to its application after the trial of 24 hours has shown its efficiency. One person at a time can easily keep the coil in order, and no extra amount of intelligence is required, while the bath cannot possibly be given the adult by less than two persons, and it is extremely difficult work for them, and at the same time it requires considerable skill to know how long to continue the bath. Again, a bath tub in a room takes up a great deal of space, and is always in the way when not in use. In the small roomed house, now so frequently built, the bath treatment is almost impossible. Again, the patient, if conscious, his relatives, friends and neighbors are sure to object to the use of the bath or wet pack, while they stand in gaping awe of the coil, and soon become its most earnest advocates. Should any fears that pleurisy, pneumonia or bronchitis will be caused by the coil be expressed, we can refer them to the statement of Prof. Thomas who says that in his service in the Woman's Hospital, this means of controlling temperature is as common and as freely used as poultices or gargles usually are. The coil or cold bath strangely enough never has caused pneumonia or congestion, but, on the contrary, frequently causes their improvement or disappearance. It is important that the application of the coil be persisted in for a long time to get its benefits. In only one case have I been prevented from making a thorough test of the coil.

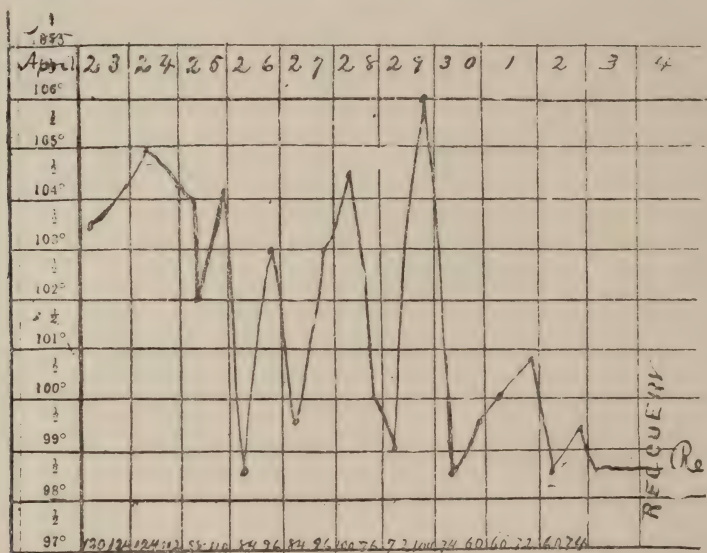
The construction of the coil is a subject of some moment. Chamberlain's coils, furnished by the instrument makers, are expensive, liable to get out of order easily, and adapted for only one sort of application. Profiting by these facts, I have constructed the coil out of 50 feet of white rubber tubing, having a one-eighth inch aperture, sewed on to heavy muslin or light canvas. This enables me to adapt the coil to any particular region of the body desired, as the head, the chest, abdomen

or spinal column. The whole outfit can be prepared for about four dollars, and replaces those of the instrument makers costing ten or twelve dollars. The coil works on the principle of a siphon. One end is placed in a bucket of ice water, situated on a stand which is two or three feet higher than the patient; the other end is placed in another bucket on the floor containing ice. When the bucket on the floor is about half full, its contents should be dipped into the upper bucket, and thus once the upper bucket is filled no further supply of water is necessary. A gauze filter should surround the receiving end of the tube so as to avoid the entrance of dust from the ice into the tubing and its consequent clogging. I usually place a stick of wood across the middle of the lower bucket and suspend the end of the tubing from it in order that the sound of the running water may be heard by the nurse and the right time for emptying the bucket be known. The rule which I have laid down in regard to its application and removal are as follows: Commence to apply the coil when the temperature reaches 103° and shows a tendency to go higher. Keep the coil on constantly once it is applied, until the temperature comes down to 100° . Take it off then and replace it when the temperature reaches 102° . Instruct the attendants how to take the temperature in the mouth every two hours during day and night and record it, noting at the same time in writing any symptoms which may occur, also the amount of nourishment taken and the administration of the medicine. In this way a complete and valuable record of the case may be kept. Watch the extremities carefully, and counteract any tendency to chilliness by keeping hot water bottles to them. The body should be sponged off with soap and warm water each day to keep it clean and the pores open. Wash the mouth and teeth also each day. Up to the present time I have used the ice coil in the treatment of 20 cases of fever, as follows:

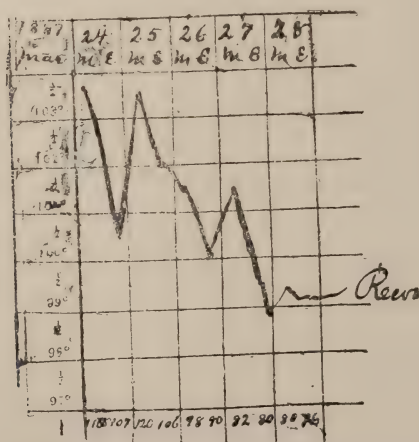
Puerperal fever, nine cases, one death; typhoid fever, seven cases, two deaths; cerebro-spinal fever, three cases, one death; peritonitis, one case, successful.

The treatment of puerperal fever by means of the curette intra-uterine douching and the ice coil, I have already detailed in a paper read before this society at its meeting in Springfield,

October, 1886. Since that time I have treated five cases, and thus far the successful record has only been broken once. The



Mrs. P. K., aged 23 years. Puerperal Fever. First seen 24 days after delivery, probably 21 days after disease commenced.

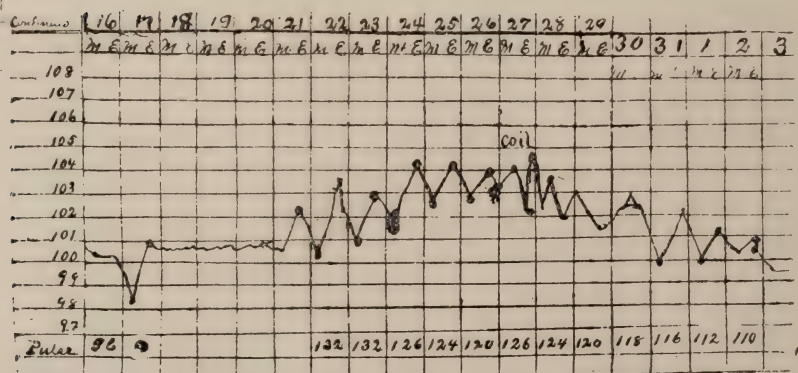
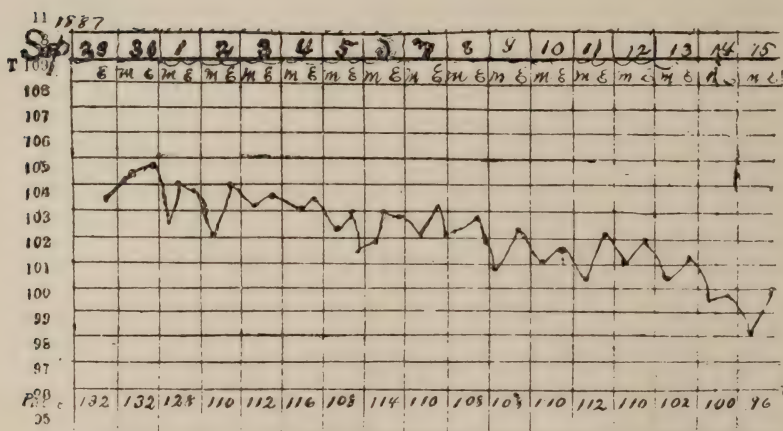


Mrs. A. S., aged 21. Eight days after confinement; probable third day of disease.

disease in this case was altogether extra-uterine, and the occurrence of severe trouble feared two years before the birth of the child. It should really not figure as a case of puerperal poisoning, but inasmuch as the difficulty came to a crisis just after child-birth, I have placed it as a case of puerperal fever. The only procedure which I believe might have possibly saved this patient was a laparotomy with the object of emptying a pocket of pus in the right broad ligament. Upon consultation it was decided not to undertake this procedure, and our other less radical efforts proved unavailing. In the eight other successful cases the coil has rendered valuable service, as the charts and statistics show. I have used the coil in the treatment of seven cases of typhoid fever with two deaths. In four of the cases the history is remarkably favorable. I present the temperature, chart and short sketches of two.

Jennie McG., æt. 16, very large and strong for her age, was taken several days before my visit with a fever, following the usual period of two weeks' languor and obscure symptoms. Upon my first visit the temperature was 103.8° , and there was intense headache. The next morning the temperature reached 104.2° , and the evening of the same day, 104.8° . The headaches continued, notwithstanding the use of medicine calculated to control it. I determined to delay no longer in applying the coil. Notwithstanding the violent protests of the grandfather, an old practitioner of medicine, I succeeded in keeping it on until the close of the disease. Within 12 hours the violent headache disappeared, and did not return. The appetite remained excellent throughout. There was very little dryness of the tongue and no cracking of it or of the lips. No delirium, no diarrhea, in fact, no uncomfortable symptoms whatever. The eruption made its appearance at the proper time, and the constant tenderness in the right iliac region assured the diagnosis. If any doubt had been retained as to the character of the disease in this case, it was set at rest by an unfortunate action on the part of the nurse who permitted the patient to eat raw cod fish and raw apple after she had been entirely free of fever for four days. The usual symptoms of relapse were found when I

was recalled. I attempted to combat them with antipyrin, but entirely without success. Finally, I rather unwillingly returned

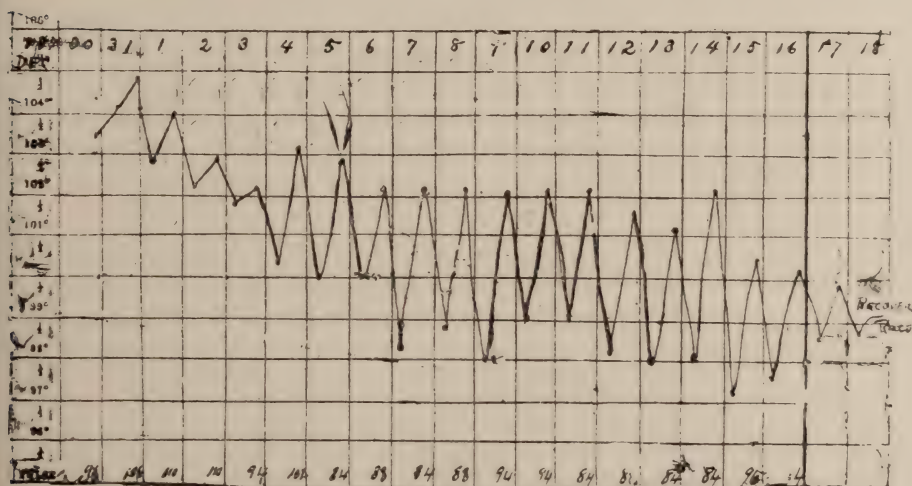


Jennie McG., aged 16 years. Typhoid Fever.

to the coil, and, to my great delight, it worked like a charm. The temperature fell at once, the secretion of urine, which had

been quite scanty, became profuse, and convalescence was soon established.

John S., a tall, delicate boy, of nervous disposition, is another case very similar to that just detailed. There was in this case no relapse, and no bad symptoms. No medicine was given except carbolic acid, tincture of iodine, and a little calomel and chalk, to act on the bowels. This case was seen by several med-



John S. Typhoid Fever.

ical gentlemen who fully confirmed the diagnosis. The progress of the case under the coil was so favorable that in order to make the diagnosis more certain I offered to remove the coil, but the intelligent parents objected so strongly that I was not permitted to do so. The origin of the disease from a defective sewer, its onset, the eruption, tenderness in the iliac region, etc., all went to prove the diagnosis, although it differed from the typhoid fever as usually seen in every other respect.

Mrs. R., at. 30, was treated in an extremely severe and prolonged attack of typhoid fever by my friend, that excellent practitioner, Dr. T. W. Dresser. The ordinary period of typhoid had long passed, and yet the fever continued, and the pa-

tient was extremely emaciated. The prostration and delirium were so great that she did not recognize her own mother who came from a distance and remained several weeks nursing her. I was called in consultation after the doctor had exhausted the list of antipyretics in his endeavor to control the pyrexia. Together we gave drugs still another trial but without success. Finally, as a last resort, and relying on my previous success with the coil in puerperal cases I advised its use to control the fever, while we endeavored to utilize the alimentary tract for nourishment alone. The doctor consented to this plan of treatment, and the patient recovered. Dr. Dresser has been since that experience a convert to the use of the coil, owns one, and has used it successfully in several cases. The two cases of typhoid fever in which the coil was used unsuccessfully were as follows:

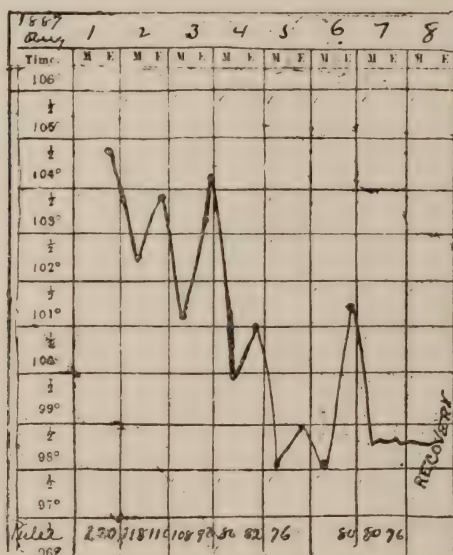
Mrs. H., German, widow, aged 46, hard worker at the wash-tub from which she derived her support, lived in an unventilated house of two rooms, twelve feet from the corner of which was a foul privy vault. In order to spare expense she was treated during the early part of her illness by a German druggist, who by means of compound cathartic pills, black draught, and castor oil brought her to the last stage of exhaustion. She had twelve operations the night before I was called. On the tenth day of the disease her temperature was high and all symptoms extremely unfavorable. The ice coil was applied, but on the 17th day of the disease the patient succumbed. The post-mortem showed all organs intact and in fairly good condition. The only explanation for the death was the exhaustion caused by the severe purging before I saw her. The second fatal case was B. H., a delicate boy, aged 14, whom I was asked to see with my friend Dr. Townsend, after he had been suffering with a low form of continued fever for several weeks, the coil was applied, and I saw the patient with the doctor for about a week. The temperature was controlled by the coil, and all indications led to the hope of recovery when I left to attend the International Congress at Washington. Dr. Townsend informs me that the favorable symptoms continued, and he was much surprised to have the patient succumb to cardiac exhaustion. As I have be-

fore said, in only one case have I been prevented in carrying out the ice coil treatment, once it has been undertaken. As this was a case of typhoid fever it can best be referred to here. A delicate girl of about 8 years was stricken early in February 1888, with an extremely severe typhoid. On the fifth day of the disease the coil was applied, and although not faithfully used during the entire time, it was continued for twelve days, when I was superseded because the mother, a physician's widow, was not satisfied with the treatment by the coil. I have not the record of the temperature, but, as I remember it, the fever during attendance did not go above 103° . After the removal of the coil, I learn the temperature reached the unusual figure of 106° . The patient suffered a relapse and lay for a long time in a very critical condition. In this case the coil and bath which was added to it scarcely accomplished what I had a right from previous experience to hope. I am of the opinion that this is one of the class of cases of which Liebermeister says: "In some cases the extreme obstinacy of the fever occasionally resists the most systematic use of baths." My moderate results with the coil are, however, no indication in this example against the coil since the temperature went much higher after the coil was removed than it had gone before. I believe that a much better contest can be made even in these desperate cases with the coil than without it.

I have to relate further that the coil has been applied in three cases of cerebro-spinal meningitis. The temperature chart of the unsuccessful case shows what an heroic contest was made by the coil assisted by cold packs¹. The coil in this case was made in the shape of a cap covering the head and also applied to the spinal column. The application was not made until the third day of the disease or until the temperature had reached an extremely high point. The second case resulting in recovery promised an equally bad attack as the other. Prompt application of the coil was made to the head, and a happy result obtained. I have also used the coil on one case of slight peritonitis which offers no particular point for remarks. I have, gentlemen, in this paper

¹Temperature chart of this case omitted because of its great length.

endeavored to state the reason which led me to use the coil, and have given a plain statement of the results, good and bad, obtained by it. I am an earnest advocate of its appliance in those cases where a high fever is to be combated, and honestly be-



Willie R., aged 12 years. Cerebro-spinal meningitis.

lieve that its benefits are such that it should be given a wide application. In the fever of scarlet fever,¹ measles, pneumonia, tuberculosis and other diseases I have not given it a trial but stand prepared to do so whenever a favorable opportunity offers. I do not pretend to say that it will cure every case nor that it

¹In this connection I will insert the following item on the treatment of scarlet fever taken from the *London Lancet*, September 3, 1887. For cerebral symptoms nothing is better than the application of cold, either by lint soaked in ice-water and applied to the shaven head, or in the more effective capillary tubes with irrigation. Actual bathing in cool or tepid water is practised by but few physicians, though the number of physicians who recommend the use of cold or tepid sponging appears to be largely on the increase.

should be used alone to the exclusion of drugs and proper diet. I have given you an accurate statement of my statistics ; and while they may not be as favorable as I wish, yet they are to me highly encouraging, and I hope they will be sufficient to induce you all to give the method a trial.

REPORT ON THE RECENT OUTBREAK OF SMALL-POX IN SCHUYLER AND ADAIR COUNTY.

BY G. A. GOBEN, M. D., *Member State Board of Health.*

TO THE MISSOURI STATE MEDICAL ASSOCIATION.

MR. PRESIDENT AND GENTLEMEN:—Having been requested by the Secretary of the State Board of Health to submit a former report made to that body in regard to the origin and spread of small-pox in Adair and Schuyler counties, with a supplemental statement containing such additional facts in the case as have since come to light, I beg leave to state that at the last meeting of the State Board of Health, Feb. 27, 1888, I submitted the following:

“As to the true origin of the small-pox in this and the adjoining county, there are several rumors, but the theory accepted by most, is that a young lady residing near Greentop, Schuyler county, was on her way to Kirksville. She saw a strange woman on the train sitting on the seat before, her face so covered that she could not distinguish her features or even determine at first whether she was a woman or a man, for even her body was almost completely covered up with wraps. She soon became aware that the woman was sick, but of course had no idea with what disease she was afflicted. The young lady made a short stay in Kirksville, and returned to her home near Greentop. In due course of time she was taken sick with a fever. It was not at first known what ailed her, and many persons called in to see her, and thus the disease was spread through the neighborhood. Some of the children of the district school took it, and being confined in a close room with others, it is supposed that they

gave it to them. It is reported that one girl continued to go to school even after the fever was on her, and fainted in the school-room. As nearly as can be estimated, there are twenty-five cases in Adair county, and five in Schuyler county, near the north line of Adair. There has been but one death and that was a lady who was pregnant at the time and died from miscarriage. The doctors who have treated these cases, so far as known to the writer, are Dr. Parish, who was first called to see a Mr. Smith, living in Schuyler county, and on discovering that the disease was small-pox, refused to treat him any further. Dr. Avery then took the case, and has successfully treated not only Mr. Smith, but four others of his family who have since taken it. Dr. Wilson has attended about twenty-five cases of small-pox in Adair county, and lost but one, the lady referred to, whose death was caused by miscarriage, brought on by small-pox. He attended the first case, and has been the chief physician in the cases. The county court of Adair county have done nothing, as they say they have not the power under existing laws to do anything. The city council of Kirksville have done all in their power to prevent the spread of the disease. A board of health has been appointed under the city charter. Every person known to have been exposed has been vaccinated, and everything possible done to prevent the spread of the disease, and to isolate those who have been exposed. We think that we have the disease thoroughly under control. The disease is in the country at farm houses, and not in towns as reported, save a single case at Millard in the southern part of Adair county. There have been, as nearly as I have been able to estimate, about one thousand persons vaccinated. I have vaccinated over one hundred myself. I ordered vaccine virus from Chicago, St. Louis and Columbia, Mo. It was some time before virus could be obtained, but I at last received it from the latter place, and used it with excellent success. I don't think it failed in a single instance. Too much cannot be said in favor of the value of vaccination. In every case, where exposed persons who were vaccinated took the disease, they had it only in the mildest form."

Since the above report, effort has been made to trace the woman who was supposed to have brought the disease into the

county, but it has been unavailing, and we have been unable to find any other theory to account for the contagion. She was on the train as above described about the 10th or 15th of January 1888. Since the above, there has been one additional death, making two in all. There have been two new cases reported at Millard, but the patients having been previously vaccinated, the cases are very mild. Fifteen or twenty new cases have been reported near Greentop, but those who were vaccinated are not reported as serious. Most of the new cases are in the same families, consequently the disease can not be said to be spreading. The small-pox, as nearly as we have been able to ascertain, has been in about twenty families, the number of deaths but two, and the number of patients fifty.

In my former report, I should have mentioned Dr. Snider, of Millard, as one of the physicians who was called in to attend the first case reported at that place.

In this supplemental report, I reiterate everything which I said in my former report in favor of vaccination. If people would attend to this properly, using only the purest and best virus, the horror and dread of small-pox would in a great measure pass away, and it come to be regarded as a serious, but by no means a dangerous disease. My experience teaches me that quarantine, where enforced by the local authorities, prevents the spread of the disease, and has in many cases produced the most satisfactory results. I think it would be well for the Missouri State Medical Association to use their influence, both as a body and as individual members to induce the next legislature to enact sufficient quarantine laws, and provide for their strict enforcement in cases of epidemics, such as Adair and Schuyler counties have suffered from.

Addendum by the Secretary of the State Board of Health.—In view of the interest and importance attaching to a correct knowledge of the source and beginning of an epidemic outbreak, such as is described above, the following supplemental data are given, the information having been obtained from the several railroad officials mentioned through a request made by me on March 28 to Dr. J. W. Jackson, Chief Surgeon Wabash Western Railway Co., at Kansas City.

The station agent at Greentop, Mr. H. Sonderhausen makes the following statement under date of May 2.

"I will say that through much inquiry I learn that on or about Jan. 20, 1888, a Miss Edwards living about three-and-a-half miles southeast of this place, got aboard our No. 2 train here on her way to Kirskville, and she says a lady heavily wrapped and apparently in much misery, sat in front of her, and it is to her that Miss Edwards attributes her becoming inoculated, as it was only eight or nine days afterward when she was prostrated with the disease.

The malady not being at first understood in the neighborhood, people visited her in the first stages of her sickness, and contracted thereby a spread of the disease.

The brother's bringing it home from a point west was for a while spoken of, but this theory does not gain credence, as it was but three or four days after his coming home until his sister was taken sick."

Mr. E. A. Gould, master of transportation, at Moberly, Missouri, contributes the following information under date of May 16. Referring to the suggested origin of the disease in the foregoing communication he says: "This was the commonly accepted theory as to how it originated for some time after it broke out, but another and more plausible theory was, that a young man named Dick, a brother to the the lady who was first attacked, came to her house from some point on the Santa Fe Road, and who had just recovered from small-pox, and she had contracted the disease from washing his clothes. I have made diligent inquiry among train men running north, and had them to investigate as best they could, and the general verdict appears to be in favor of the latter theory. Conductor Williams, who was running No. 2 the day the heavily wrapped lady mentioned is supposed to have been on that train, says he can remember nothing of any such circumstance. If there is anything further that you can suggest as to the best way of going further into the case I will gladly pursue the matter still further."

Effort on my own part to gain additional light in regard to the mooted question involved by direct correspondence with the parties who were affected with the disease in the locality named have been fruitless, no replies being vouchsafed to letters written soliciting the information sought.

GEO. HOMAN.

CASES FROM PRACTICE.

RUPTURE OF THE LONG HEAD OF BICEPS MUSCLE.

BY GEO. HOMAN, M. D., ST. LOUIS.

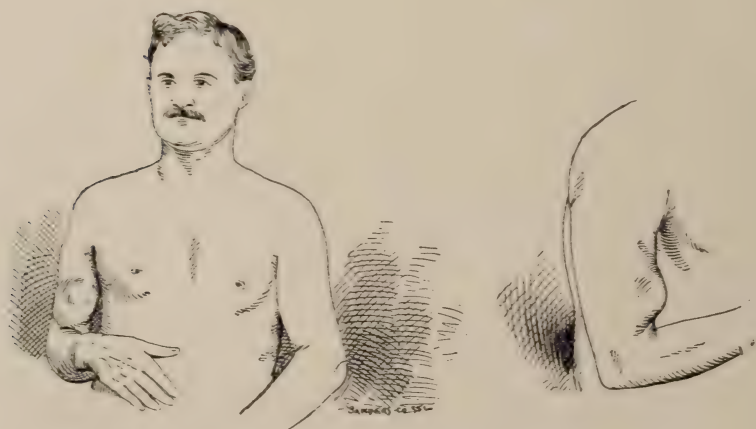
Presented before the St. Louis Medico-Chirurgical Society.

J. C., age 40 years, Irish, policemen, between eight and nine o'clock on the evening of Oct. 12, 1886, was thrown violently from a flat car by a sudden movement of a railroad train which was blocking a street crossing, while the officer was in the act of climbing over it. Being thrown sidewise his right shoulder and arm struck the ground, the arm being twisted around, and he was soon afterwards taken to the office of Dr. William A. Fries, who has kindly given the following account of the injury and treatment:

"October 12, 1886, about 10.30 P. M., the officer was brought to my office, with a sub-glenoid dislocation of right humerus. I employed the usual methods for reduction, but failed on account of the extreme resistance of the muscular forces. Chloroform was then administered by Dr. Moeller, and afterwards there was not much manipulation required to reduce it. I also found before reduction a contused condition of the shoulder in the region of the joint, coracoid and acromion processes, with extravasation of blood into the tissues of the soft parts—so much so that the exact condition of the muscles in the vicinity could not be made out at the time. The arm was bandaged lightly to the side of the chest, and was not disturbed for several days: this method of treatment was continued for several weeks, after which the dressings were removed and stimulating embrocations ordered. At this stage, the discovery was made that when the fore-arm was flexed, a hard

knot was found at the outer half of the belly of the biceps, which, in my opinion, resulted from a rupture of the long tendon, the consequence of this, and probably some injury to the deltoid, is that the arm cannot be raised to more than a right angle to the body, which is the condition at present."

The correctness of the opinion of Dr. Fries is apparent at a glance when the patient's clothing is removed (see cut) and the natural movements of a normal arm are attempted by him, he being unable to raise the hand or elbow above the level of the shoulder, while the power of supination in the forearm is nearly lost. In the upper portion of the outer half of the anterior aspect of the arm is an unnatural depression terminated abruptly by a knotted irregular elevation, in marked contrast to the appearance of the same region in the opposite arm.



The officer was a muscular, able-bodied man at the time the injury was received, weighing about 170 pounds. He has experienced much pain and inconvenience in consequence of it, and the right arm is practically totally disabled so far as usefulness in his present employment is concerned.

EDITORIAL.

INVERTED SUSPENSION IN APPARENT DEATH FROM CHLOROFORM.

Dr. Julian J. Chisolm read a paper before the Baltimore Academy of Medicine, Dec. 8, 1887, in which he expressed strong preference for chloroform as an anesthetic, basing this preference upon his own experience in the administration of this agent in over 10,000 cases without a single fatal result.

He stated that he had come to depend more than upon any other measure upon inversion and suspension of the body, for resuscitation in cases when respiration or cardiac action have been suspended. He related the particulars of four cases occurring in his practice in which apparent death took place, but in which the patients were resuscitated by inverting the body so as to cause the blood to gravitate to the brain.

He thus describes his mode of administering the anesthetic.

"Chloroform is administered with the patient lying on his back and as soon as narcosis is induced the pillow is taken from under his head, so that he lies in an absolutely horizontal position. Should snoring occur, indicating pharyngeal breathing, the chin is drawn forcibly upward. This elevation pulls the anterior wall of the pharynx, with the hyoid bone and root of the tongue, forward, making for the air a clear and straight passage from the nose into the lungs. By this movement of the chin respiration becomes quiet and easy. The pulling up of the chin is a much more efficient and convenient means of pulling the root of the tongue forward than by pulling out the tongue with dressing forceps, as is

recommended by some surgeons. It is not always easy at this stage of anesthesia to get into the mouth, as the lower jaw-muscles may not be relaxed. A proper tongue-forceps is not often at hand, and to tear the tongue-substance with sharp-toothed and yet slipping instruments, with the soreness and swelling which subsequently follow, is an abominable practice that should be abolished. The patient's chin and your own hands are always present, and it only needs knowledge of the method to apply it to secure prompt and speedy relief.

The instrument used for the inhalation is a towel folded in cone form, with the apex of the cone opened, so as to permit air to mingle freely with the chloroform vapor. During the administration the face is closely watched by the surgeon. If the ears remain pink, the heart and lungs must work properly; therefore, there is no need to feel the pulse. Any failure on the part of either of these organs can be seen in the change of complexion more quickly than it can be felt at the wrist. When the conjunctiva is no longer sensitive, the patient is considered thoroughly anesthetized, and the administration of chloroform is stopped. In eye-work the chloroform-administrator must now get out of the way for the surgeon, and therefore, the administration of the anesthetic cannot be injuriously continued. Herein lies one great point of safety with the ophthalmic surgeon."

He states that he denies chloroform to no surgical patient, and that his patients have ranged in age from infants to octogenarians, and have been of varied sanitary condition.

To the prompt use of suspension in an inverted position, as first suggested by Nelaton, the French surgeon, in cases of chloroform poisoning, Dr. Chisolm attributes the fact of his clean record of over 10,000 administrations of chloroform without a death.

He remarks that "too little of the anesthetic—not enough to protect the important vital centres from the influence of painful reflex actions—is as dangerous as an overdose of the narcotic inhalant. Many of the fatal accidents occur in the hands of timid

physicians or dentists, who are afraid to administer enough of the anesthetic to secure the stage of safety, of immunity from reflex disturbances, and who lose their head in fright when the danger, which their want of confidence has induced, presents itself."

No surgeon, he says, should ever give an anesthetic without having some one else present. If there is any sudden and alarming weakening of heart's action or respiration, without a moment's delay hang up the patient. If the patient is too heavy and there be not help enough present to elevate the foot of the table or bed, throw the head and body over the side of the bed or table, letting the head hang downward, and hold onto the legs so that the body shall not slide onto the floor.

Or, if this be not effective, the surgeon should stop and throw the legs of the patient over his shoulders, and then holding onto the feet in front of him raise himself up. Thus the patient's body will hang upon the surgeon's back with the head down. Then more help can be summoned, if necessary, but he urges immediate suspension without waiting for help to come in cases where respiration and heart's action are arrested.

RECTAL INSUFFLATION OF HYDROGEN GAS AS A DIAGNOSTIC TEST OF INJURY OF THE GAS- TRO INTESTINAL CANAL IN PENETRAT- ING WOUNDS OF THE ABDO- MEN.

No man in our country has placed the medical profession more deeply in his debt than has Dr. Nicholas Senn, of Milwaukee, by the experimental work which he has done with regard to important questions in abdominal surgery, during the last three years. Nor, we may remark incidentally, has vivisection ever been more fully vindicated as a most valuable means of good to man than in the work which he has done.

In a paper read before the Surgical Section of the American Medical Association at the recent meeting at Cincinnati, Dr. Senn presented the results of a discovery, or, perhaps, it might be called an invention, which will be of very great value to the profession and to those suffering from penetrating wounds of the abdomen.

Every method of securing accuracy in diagnosis is of value in proportion to its simplicity and readiness of application.

In the discussions concerning laparotomy after abdominal wounds which have occupied so much of the time in medical society-meetings, and so much space in the journals, during the last few years, one point that has always been brought forward by those who incline to conservatism with regard to operative interference is the difficulty, or impossibility, of determining with certainty whether or not the gastro-intestinal canal has been wounded by the blade or missile which has penetrated the abdominal walls.

Thanks to the ingenuity and persistence of Dr. Senn, this difficulty has been obviated, and now it is practicable for the surgeon called upon to treat a case of abdominal injury, readily to determine whether the gastro-intestinal canal is involved in the injury, and so act more intelligently upon the question whether laparotomy is indicated or not.

Dr. Senn took a hint from the method in use by plumbers to locate a leak in a gas pipe, and having first proved the permeability of the entire gastro-intestinal tract to air, he sought for some innocuous gas, which, when the intestine was inflated, would escape from an intestinal wound into the peritoneal cavity and from that through the external wound manifesting its presence by some infallible test.

A series of twenty-six experiments demonstrated the permeability of the ileo-cecal valve to gases without rupture or injury to any of the coats of the intestine. Another series of experiments demonstrated that the resistance of different portions of the gastro-intestinal canal is about the same, and everywhere greater than is necessary for forcing the gas to all parts of the tract. Still others

demonstrated the practicability of distending the intestinal tract with hydrogen gas. Many of the experiments were made upon human beings, and some of them upon himself. He demonstrated still further the innocuous character of hydrogen gas upon the tissues of the body, and its prompt removal by absorption.

Further experiments demonstrated the applicability of inflation of the intestinal tract with hydrogen gas as a conclusive and infallible test of perforation of the canal.

The preparation of hydrogen gas by the action of dilute sulphuric acid upon metallic zinc is one of the simplest of chemical experiments; and no apparatus is necessary except a few feet of glass and rubber tubing, a couple of wash bottles, and a rubber balloon for containing the gas, and a suitable tube for passing it into the bowel.

If additional demonstration be deemed necessary besides the prompt distention of the abdomen by the gas which escapes from the intestinal wound into the peritoneal cavity, this can be secured by introducing a catheter or glass tube through the wall of the abdomen when the gas escaping from the outer end may be ignited.

If no escape of gas takes place from the intestine into the peritoneal cavity under a pressure of two pounds, it is certain that no wound of the canal has taken place.

SYPHILIS AND MARRIAGE.

In the *Sanitarian* for May there is a paper by C. E. Beardsley, of Ottawa, with the title "Should Syphilis be made a Legal Bar to Matrimony?" The author takes the affirmative side of the argument; and what he says is well worthy the consideration of thinking men.

He regards "syphilis as a specific disease, produced by a specific germ or virus, which attacks every tissue of the body, causing changes therein which time and medicine cannot efface, and those

changes, or effacements, are as transmissible as any form of an organ of the body—the flat or the Roman nose. He admits, as all must, “that there are cases of syphilis which seem to have entirely recovered, that show no signs of syphilis, nor do their children,” but holds that this is “the exception to a rule of which the reverse is the true course.”

He maintains that the same law holds good in syphilis as in all acquirements, viz., that that which is acquired by the individual is prone to be transmitted, modified it may be, but not left out.

Recognizing in syphilis a curse which is more destructive to the well-being of mankind than small small-pox, cholera and yellow fever combined, more deserving of suppression by the authority of the state than the efforts of traitors and anarchists, he would invoke the power of the law to educate the people in self preservation, to quarantine those suffering from active manifestations of syphilis, as in other infectious and contagious diseases; he would isolate individuals, and would enforce celibacy or even require castration for the male and oophorectomy for the female subject of constitutional syphilis.

While it is true that some—many cases of syphilis do recover from all active manifestations of the disease, and that quondam syphilitics do beget or bear children who have no evidence of constitutional taint, we believe it is and will be utterly impossible to assure any person who has had syphilis that he or she is certainly free from the disease, or that the children will be exempt from hereditary taint. We believe that while it cannot be claimed as absolutely and invariably true that once syphilitic is always syphilitic, it is true that a person once syphilitic always must recognize the possibility that even after years of quiescence and dormancy either in his own person or in that of his children there *may* be bitter reminders of youthful indiscretions or misfortunes.

What right has any man to beget syphilitic children? What right has any woman to bear such offspring? What right has any man or woman to bring into the world children who will of neces-

sity, or even very probably, be handicapped in the race by constitutional characteristics by reason of which they must belong to the class of physical, mental or moral defectives?

Is it right for any epileptic, any insane person or person of distinct predisposition to insanity, any consumptive, or any person affected with constitutional syphilis to propagate these defects and multiply these weaknesses?

Certainly an application of the principle which seeks the best good of the greatest number would warrant the negative answer to these questions; and carrying the same principle out to its legitimate conclusion would require the government to forbid such persons to marry, and even warrant the use of the knife in order to prevent procreation on the part of those who should refuse voluntarily to comply with such legislation.

Not long ago [June 1887] we called attention to a suggestion of Dr. Dozier, of California, that castration should be made the legal penalty for the crime of rape, and expressed our approval of it as manifestly appropriate.

When the world shall have advanced to a point when that penalty shall be prescribed and enforced against those guilty of that crime, it will be quite possible that other legislation may be secured by which for the protection of society, not as a penalty for wrong doing, the syphilitic, the consumptive, the epileptic and the insane will be forbidden to increase the sum of human woe by transmitting their diseases to posterity.

MR. LEOPOLD HOFF, of Hamburg, who in 1866 first introduced into this country malt extract as a medical agent was in attendance at the recent convention of the American Medical Association at Cincinnati.

An elaborate display of the above named malt extract was made by the agents, Messrs Tarrant & Co., of New York, and attracted considerable attention, and many favorable comments from physicians who had successfully used the malt extract in their practice.

BOOK REVIEWS AND NOTICES.

CONTRIBUTIONS TO THE STUDY OF THE HEART AND LUNGS. By JAMES R. LEAMING, M. D., New York, E. B. Treat, 1887. Small Svo., pp. 300; cloth, \$2.75.

This volume consists of papers which the author has published from time to time during the last twenty and more years in various medical journals and in transactions of medical societies. They are divided into three groups. First, those pertaining to the respiratory organs; second, those pertaining to the heart; third, those pertaining to miscellaneous subjects, having some relevancy to parts first and second.

Dr. Leaming holds that all the fine râles as well as most of the coarse ones are interpleural, not intrapulmonary, that the crepitant râle of pneumonia, the subcrepitant râle of pulmonary edema or capillary bronchitis are of pleural origin, and are not heard unless the pleura is involved. We cannot accept Dr. Leaming's views in their full extent, though it well may be that most râles, both large and small, do originate in the pleura far more frequently than is usually taught.

With regard to the tubercle bacillus our author says:

"I do not doubt the discovery of bacilli in great abundance in tuberculous cavities and in the sputa of tubercular consumptives, as well as in the adjacent tissues, but I cannot accept the inference that they are the essential causes of tubercle."

The volume is well worth careful reading and contains much that will profit not only the student, but the practitioner of experience and standing; and we take pleasure in calling the attention of our readers to it.

THE CURABILITY OF INSANITY and the Individualized Treatment of the Insane. By JOHN S. BUTLER, M. D., etc. New York and London. G. P. Putnam's Sons, 1887. 18mo., pp. 59, cloth, 60 cents.

This little volume contains, elaborated and well presented, the usual argument in favor of treating the insane. And this the author

has reinforced by illustrative cases from his own and others' experiences.

FUNCTIONAL NERVOUS DISEASES: Their Cause and their Treatment. Memoir for the concours of 1881-83, Academie Royale de Medecine de Belgique. With a Supplement on the anomalies of Refraction and accommodation of the eye and ocular muscles. By GEO. T. STEVENS, M. D., Ph. D., Member of the American Medical Association, etc. New York, D. Appleton & Co., 1887, 8vo., pp. 217, cloth, \$2.50.

This volume has been on our table for review for some time past. We have seen flattering accounts of it appearing in other journals from time to time, and have felt that it would be safe at any time almost since it has been in our hands to commend it cordially. We have waited until we had opportunity to read it carefully. Having done so, it gives us great pleasure to say that we have seldom read a more instructive book. In the short space of a review article it is impossible to do justice to any of its excellences. We would rather advise every one interested in any department of medicine to procure the work and read it. No general practitioner can afford to be without the knowledge it contains after it has been put into such accessible and attractive shape as he will find it in this little volume.

The work is a discussion of the effects on the nervous system of abnormal ocular conditions. The title should be made to indicate this fact more definitely. Or, perhaps, the title will induce some to read the book who, if they had an idea that it appertained especially to ophthalmology, would not. Once having got it, though, we are sure that its attractions will not allow it to be put aside until well read.

It contains the record of many instructive cases, such as we have all seen and many of us failed to analyze, when if we had the light that is here thrown on them we could not have failed. The illustrations and their accompanying descriptions are alone worth the price of the book, on account of the lessons they teach. F. R. F.

MANUAL OF TREATMENT. A Concise Presentation of the Modern Methods of Treating Disease, employed by the best authors, teachers and practitioners, etc. By C. F. TAYLOR, M. D., editor of the "Medical World," and W. F. WAUGH, A. M., M. D., etc., published by the Medical World, Philadelphia, 1887. Cloth, \$4.00.

The above voluminous title represents a work, the nature of which does not call for an extended notice. It is what it claims

to be, a manual of treatment "arranged with special reference to the needs of American practitioners," and selected from the practice of eminent physicians.

The question naturally arises, does not the multiplication of manuals, handy reference series, *et id genus omne*, tend to discourage research and investigation into the more elaborate treatises on medicine? I claim that the medical man too indolent or incompetent for research, would "ply his vocation" all the same, and when in possession of a work like the one under consideration, would be better qualified to practice than should no such works exist. The selections in this work are good, the arrangement admirable, and, upon the whole is to be highly commended; but I cannot close without "calling a halt" to the treatment of acne as laid down by the authors. They say: "The fact that this annoying disease occurs so frequently at the age of puberty should lead us in all cases to investigate the condition of the sexual organs. If any undue sensitiveness exists in the urethra, a metallic sound should be passed every other day and allowed to remain some minutes. In females, hot vaginal douches, with cold douches to the spine every morning will frequently prove effective."

The cautious and skilful use of the sound is frequently followed by urethral fever, orchitis, etc., to say nothing of the false passage and resulting stricture following the unskilful use of it, so that I honestly doubt the propriety of bringing into requisition so potent (for evil) an agent for the treatment of so simple, yet exceedingly troublesome, disease as acne. Besides several eminent dermatologists agree that masturbation¹ is a frequent cause of acne and should every "general practitioner" in this country march out "on his rounds" armed with the metallic sound, in search of a "sensitive urethra," we would have a typical exemplification of cause for effect, and effect for cause.

J. J. M.

ESSENTIALS OF CHEMISTRY AND TOXICOLOGY for the use of students in Medicine, by R. A. WITTHAUS, A. M., M. D., etc. Second edition, New York, William Wood & Co., 1888; 32mo., pp. 294, cloth.

This little volume has been practically rewritten since the first edition was published. In the present form it is an excellent aid

¹ I am not unmindful of the fact that the passage of the sound has been recommended as a remedy for masturbation.

for quizzing, and will be of service to students in preparing for that kind of work.

NEW YORK MEDICAL JOURNAL VISITING LIST AND COMPLETE POCKET ACCOUNT BOOK. New York, D. Appleton & Co.

This is a very compact and ingenious pocket account book for physicians, of convenient size for the pocket, well bound and made of good paper. It has the advantage of showing at a glance the account of any patient, to the extent of thirty-one visits, consecutively or otherwise, but does not show at all the account of work done or to be done on any day, which seems to us a decided disadvantage.

OBSTETRIC SYNOPSIS, by JOHN S. STEWART, M. D., etc., illustrated. Phila.: F. A. Davis, 1888. 12mo.; pp. 202, cloth.

If such synopses are to be used at all, this is a good specimen of the class. That they *may* be of service in reviewing lectures for examination cannot be denied, but they should not be allowed to substitute the more complete treatises on the subject.

The diagram illustrating the fetal circulation is an improvement in some particulars upon the familiar one of most text-books.

E. M. N.

A GUIDE TO THE PRACTICAL EXAMINATION OF URINE for the use of Physicians and Students, by JAMES TYSON, M. D., etc. Sixth edition. Philadelphia, P. Blakiston, Son & Co., 1888. 12mo., pp. 253; cloth. (St. Louis, Simpson & Co., J. H. Chambers & Co.)

There is no better work on the subject within the reach of the profession of this country, none that is more thoroughly adapted to the every day requirements of physician and student than that of our present author. The edition just now presented has been conscientiously and carefully revised, and the author has availed himself of all that has been recently written on the subject in this revision.

YEAR BOOK OF TREATMENT FOR 1887. Philadelphia, Lea Brothers & Co., 1888., 12mo., pp. 336; cloth, \$1.25. (St. Louis, J. H. Chambers & Co.)

This is another volume of the series of annual summaries of work in different departments of therapeutics prepared by eminent specialists in the several branches. It forms a valuable reference book.

BOOKS AND PAMPHLETS RECEIVED.

BOOKS.—Aseptic and Antiseptic Surgery, by A. G. Gerster, M. D., etc. New York. D. Appleton & Co., 1888. 8vo., pp. 332; cloth. (St. Louis, J. L. Boland, J. H. Chambers & Co.)—The Bones of the Leg Considered as one Apparatus, by Thos. Dwight, M. D., Boston. Cupples & Hurd, 1888. 12mo., pp. 18, paper, 25 cents.—Treatment of Hemorrhoids by Injections of Carbolic Acid, by S. T. Youat, M. D., Lafayette, Ind., Echo Music Co., 1888. 16mo., pp. 102; cloth (St. Louis; J. H. Chambers & Co.); also second edition of same.—Diseases of the Skin, by J. V. Shoemaker, M. D., New York; D. Appleton. 8vo., pp. 633, cloth. \$5.00.—Atlas of Venereal and Skin Diseases, by P. A. Morrow, M. D., New York, Wm. Wood & Co., 1888. Folio. First and second fascicule:—The Prescription, by O. A. Wall, M. D., Ph. G., St. Louis, Aug. Gast Bank Note and Litho. Co., 1888. 12mo., pp. 184; cloth, \$1.50.—Diseases of Man, by J. W. S. Gouley, M. D., N. Y., J. H. Vail, 1887. 16mo., pp. 408, cloth.—Obstetric Synopsis, by John S. Stewart, Philadelphia. F. A. Davis, 1888. 12mo., pp. 202, cloth.—Year Book of Treatment for 1887, by J. M. Bruce, et al. Phil., Lea Bros., 12mo.; pp. 336, cloth, \$1.25. (J. H. Chambers & Co.)—Diseases of Heart and Circulation. J. M. Keating and W. A. Edwards, Philadelphia, Lea Brothers & Co., 8vo., pp. 215; cloth, \$1.50. (S. M. Simpson & Co.)—Compend of Human Physiology, by Albert P. Brubaker, M. D. Fourth edition (Quiz Compend), Phila., P. Blakiston, Son & Co., 1888, 16mo., pp. 174, cloth. (St. Louis, Simpson & Co.; J. H. Chambers & Co.)—Treatise on Dislocations, by Lewis A. Stimson, M. D., Phila., Lea Bros. & Co., 1888. 8vo., pp. 539; sheep, \$4.00. (St. Louis, Simpson & Co.; J. H. Chambers & Co.)—Practical Treatise on Diseases of the Skin, by James Nevins Hyde; second edition. Phila., Lea Brothers & Co., 1888. 8vo., pp. 676, sheep. (J. H. Chambers & Co.)—Hysteria, Brain Tumor, etc., by Mary Putnam Jacobi, M. D., New York. G. P. Putnam's Sons, 1888, 8vo., pp. 213, cloth. (St. Louis, J. L. Boland Book and Stationery Co.; J. H. Chambers & Co.)—Morrow's Atlas of Venereal and Skin Diseases, No. 4. Wm. Wood & Co.—Photographic Illustrations of Skin Diseases, by Geo. H. Fox, A. M., M.D., New York. Nos. 5 and 6.—Ophthalmic Surgery. R. B. Carter and W. A. Frost. Philadelphia, Lea Brothers & Co., 16mo., pp. 554, cloth; \$2.25. (St. Louis, J. L. Boland.)—Essentials of Chemistry, by R. A. Witthaus, M. D. Second edition. N. Y., Wm. Wood & Co., 32mo., pp. 294, cloth. (St. Louis, J. H. Chambers.)—Manual of Diseases of the Nervous System, by W. R. Gowers, M. D. Phila., P. Blakiston, Son & Co., 8vo., pp. 1357; cloth, \$3.50. (St. Louis, J. Simpson

& Co.; Jas. H. Chambers & Co.)—The Surgical Diseases of the Genito-Urinary Organs, including Syphilis. By E. L. Keyes, A. M., M. D. A revision of Van Buren and Keyes' text-book upon the same subjects. N. Y., D. Appleton & Co., 1888. 8vo., pp. 704; cloth, \$5.00. (St. Louis, J. L. Boland.)—Lesions of the Vagina and Pelvic Floor, by B. E. Hadra, M. D., Philadelphia: Record, McMullin & Co., 1888. 12mo., pp. 329, cloth. (St. Louis, Simpson & Co.; J. H. Chambers & Co.)—Practical Examination of Urine, by James Tyson, M. D. Sixth edition. Philadelphia. P. Blakiston, Son & Co., 1888. 12mo., pp. 250, cloth. (St. Louis, Simpson; J. H. Chambers & Co.)

PAMPHLETS.—A Year's Work in Abdominal Surgery, by W. Gill Wylie, M. D. (Med. Rec., March 31.)—One Hundred and ten Laparotomies for the Removal of the Uterine Appendages. By W. Gill Wylie, M. D. (Annals of Gynecology, Dec., 1887).—State University of Missouri. Agricultural Experiment Station. Bulletin No. 1.—Medical Department of the Tulane University of Louisiana; Catalogue for 1878-8. Circular for 1888-9.—Fourteenth Annual Report of the Superintendent of the Cincinnati Sanitarium, 1887.—Are Dipsomania, Kleptomania, etc., valid forms of Mental Disease? By Orpheus Everts, M. D.—Catalogue of Alumni of Medical Department of Tulane University of Louisiana, 1888.—The Ultimate of Sanitation.—Transactions of the Massachusetts Medico-Legal Society, Vol. 1, No. 10, 1887. Boston, Cupples & Hurd, 1882.—Excerpt from the Biennial Report of the Board of Health to the General Assembly of the State of Louisiana, Joseph Holt, M. D., President.—Legal Aspect of Suicide. Annual Address before the Medical Jurisprudence Society of Philadelphia, Jan. 10, 1888, by Hon. Wm. N. Astrum. 8vo., pp. 6, paper.—Extraction of Cataract as influenced by Mycological Development, by A. E. Prince, M. D., Jacksonville, Ill.—The Pulley Method of Advancing the Rectus, by A. E. Prince, M. D., Jacksonville, Ill. (Ophthal. Rev., Sept., 1887, St. L. M. and S. Jour., March, 1888)—An Aseptic Atmosphere—Club Foot—A Rectal Obturator—Palatoplasty. By David Prince, M. D., Jacksonville, Ill.—Neural and Psycho-Neural Factor in Gyneciac Disease. By C. H. Hughes, M. D. (Alienist and Neurologist, April, 1888).—Clinical Notes on Pruritus, by L. Duncan Bulkley, A. M., M. D., etc. (Jour. of Cut. and Gen. Ur. Dis., 1887).—Infant Feeding, especially with Reference to Subjects with Infantile Eczema, by L. Duncan Bulkley, A. M., M. D., etc. (Jour. of Am. Med. Ass'n, Oct. 13, 1887).—Use of the Curette for the Relief of Hemorrhage due to Uterine Fibroids, by Henry C. Coe, M. D. (Med. Record, Jan. 28.)—Significance and Localization of Pain in Pelvic Diseases (Gaillard's Med. Jour.)—Elix Paraldehyde. By A. B. Cook, M. D. (Progress.)—Medical Organization. A. N. Carrigan.—Are Dipsomania, Kleptomania, etc., valid forms of Mental Disease? By O. Everts, M. D.—Fourteenth annual Report of the Superintendent of Cincinnati Sanitarium, 1887.—Treatise on Salol.—A very Valuable Lesson for those who use anesthetics. By J. J. Chisolm, M. D. 8vo., pp. 15, paper.—Milwaukee Sanitarium for the Treatment of Nervous Diseases. Extract from an

nual Report of the Superintendent for 1887.—Tubercular Syphilide of the auricle, etc. Robert Barclay, A. M., M. D., St. Louis. (Jour. of Cut. and Gen. Ur. Dis.)—Food Laws; a Paper read before the Medical Jurisprudence Society of Philadelphia, March 13, 1888, by Henry Leffman, M. D. Published by the Society, 8vo., pp. 7, paper.—Effects of Food Preservatives on the action of Diastase, Pancreatic Extract and Pepsin. By Henry Leffmann, M. D., and Wm. Beam, M. A.—Sixth annual Announcement of the Philadelphia Polyclinic, 1888-9.—Vesico-Vaginal Fistula. By Reuben A. Vance, M. D. (Cleveland Med. Jour., February, March, April, May, 1888.—The Ischiatic Crutch, by A. B. Judson, M. D. (Med. Record, June 25, '87.)—Orthopedic Treatment of Paralysis of anterior Muscles of Thigh. By A. B. Judson, M. D. (Med. Record, Feb. 4, '88.)—New Methods of Treatment of Vegetable Parasitic Diseases of the Skin, by Henry J. Reynolds, M. D., etc.—Stricture of the Urethra. Urethrotomy under Cocaine Anesthesia. By Henry J. Reynolds, M. D. (West. Med. Rep. April, '88.—Abuse of Alcoholics by the Healthy. By S. E. Chaillé, A. M., M. D. Trans. A. P. H. A., Vol. XII.

CRAMPS IN THE LEG.—R. W. ST. CLAIR says that the annoying cramps in one or both legs, which are apt to distress some people just after going to bed or while undressing, may be arrested by the following procedure.

When the cramp comes on, take a strong cord, wind it around the leg over the place that is cramped, take an end in each hand and give it a sharp pull, one that will hurt a little. Instantly the cramp will relax and, he claims, will not recur that night. For the permanent cure he advises the application of a galvanic current of electricity, six or eight cells, the negative electrode being applied over the spot that cramps, and the positive pole over the thigh. The application should be continued for ten minutes and repeated every week for a month.—*Med. Age*, March 26, 1888.

MEDICAL AND PHARMACEUTICAL CONGRESS OF BARCELONA.—From Sept. 9 to 15 there will be held a medical and a pharmaceutical congress at Barcelona. The official language will be the Spanish, but papers may be offered in any other language provided the author presents an abstract with the conclusions in the Spanish language. The time for reading a paper is limited to fifteen minutes. A preliminary programme has been issued indicating an outline of the subjects which it is desirable to consider at that time.

DOMESTIC CORRESPONDENCE.

NEW YORK LETTER.

EDITOR COURIER.—What a level head that old French practitioner had who said “Young man if your purse is light, your nerves sensitive, and your desire is to lead a quiet life and have an assured future, be a merchant, a mechanic, a farmer, an office holder, a sailor, a soldier, a grocer, anything, but don’t be a doctor.”

How many malcontents there are in the profession to-day, especially in the large cities! I was talking yesterday with a man, whose position would be considered a very enviable one by those who know him from the exterior, but his lack of practice, disappointments after years of hard work, and the constant struggle necessary to maintain an appearance of success, he tells me, make his life miserable. It is probable that we would envy the lot of our brother practitioners quite as little as we would that of our next door rich neighbor if we knew the *inside*. There is no doubt that the young man in New York has a pretty hard time of it for the first ten years, and many fall in the fight, and many quit the ranks.

Every day almost I meet business men who were once of us. One of my former neighbors now manufactures kid gloves, and the novelty of making money pleases him. I met a former practitioner the other day who tells me that he has gone into the catering business, so it is probable that he will continue to be of service to the profession. Many doctors are found in Wall street, and I must say they look happier and better fed than when they were struggling. There is a doctor in the office of Mr. Gillig’s American Exchange in Europe, which so lamentably went to the wall the other day, but I don’t suppose that fact could have hastened the collapse. By the way a number of our medical men were financially interested in this institution, I understand, but the doctors

always were noted for putting their faith and money in wild cat schemes.

There are two things which conspire to drive the young doctor out and they both begin with a big D; the Dispensary and the Drug store, both necessities, but both filled with abuses of function. Of course we all know there is a law against prescribing by a druggist, but with few exceptions they all do it. I have occasion to see each year a goodly number of cases of gonorrhea and other venereal diseases which come to me after the druggist has done his best (or his worst), and some are sorry examples of chemists' diagnostic as well as therapeutic skill. One boy recently had been treated for a clap until the subpreputial chancroid which it in reality was had become phagedenic and destroyed a goodly portion of his virile member. He refused to sue the druggist, whose name I have placed on my constantly growing list, and some day some of them will get into trouble.

That hot Sunday we had the last of April caused much headache, and a druggist told me he had been busy all day dealing out antipyrin to the complainers, and asked if there was any danger from it. It is surprising what a popular remedy antipyrin has become. The extension of its use to the cure of headache is due to my friend Dr. J. Blake White. Although it is not efficacious in all cases, many to whom I have given it find it very beneficial, and I have employed it with some success in a variety of other painful affections. It is usually given in fifteen grain doses dissolved in water, and an important point is that the patient should lie down to get its good effect. I have seen profuse perspiration and weakness, cyanosis or a blueness of the skin; and eruptions like measles in different cases from too large a dose. Five grains is sometimes sufficient. That opium and various poisonous drugs are dispensed without a physician's prescription by many druggists is an abuse which it seems difficult to become. Only the other day a mixture containing opium was prescribed over the counter by an up town druggist which almost caused the death of a six months old child, and three doctors had to work all day to save it. A similar case on the east side only a short while ago resulted in a child's death.

The druggists on their part complain that the physicians in the city are now using so many tablet triturations and similar preparations that their profits are much cut into. To tell the truth those

little tablet triturates which Dr. Fuller of this city taught the druggists the secret of making, and for which he gets too little credit, are becoming more and more popular. Dr. Fuller thinks they strike a very hard blow at homeopathic practice. They are surely very convenient for the physician, agreeable to the patient, and much surer in their effects than coated pills.

Dispensary abuses are rather on the increase than otherwise in New York. Many of these institutions are noble charities and could do more and better work had they sufficient funds. Thus the Eastern Dispensary covers a most densely packed population, and during the past year treated 27,570 patients, mostly Russian and German Hebrews. They intend to appoint fifteen physicians at a salary of \$1,000 each so soon as funds are raised to make a constant canvass from house to house and room to room in the district, to seek out contagious diseases, improve sanitary conditions and relieve and dismiss sickness in all possible ways. This is a move in the right direction, and I hope they will succeed. On the other hand we have in fashionable neighborhoods up town many beautifully equipped dispensaries which practically receive and treat all applicants, many well able to pay. Some to be sure receive ample remuneration in the way of using the patients for clinical teaching, but other institutions seem actuated by a desire to increase their census, to make a good showing, and thus present grounds for further donations and support. This works an injury to the younger men in the profession, it detracts from the dignity of the older ones; it causes the patient to lose respect for the profession as well as to lose self respect, and tends to pauperize the recipients of this would be charity, and thus be an injury to society. One large dispensary near Fifth avenue where but little clinical teaching is done, bids for well-to-do patients at a dollar a month. A very large number of these patients are well able to pay a small fee, and some I have known to be in much better financial circumstances than the physicians who gave them their services. This condition of things seems to grow worse, the competition for free patients increases. The college professor takes the fees of the student, and then takes for teaching, statistical or other purpose the patients whom the graduate should treat at moderate but easily paid fees during his first years of practice.

In the most beautiful part of Madison avenue is situated a new dispensary, elegant and beautiful, but there is not a poor person

within a mile of it, and when it is open they will have to go into another ward to get their first case, just as that very healthy town out west had to go into the next county for a corpse to start a grave yard. It is said that some wealthy lady contributors in the neighborhood of this new dispensary wanted a place to send their servants. Still there will be ten applicants for every appointment, and the men who get the places will treat all who come while they, unless wealthy themselves, will live on borrowed money or starve. And this is charity! The medical profession, at least in this city, needs a little of the spirit of union for self protection. There is no *esprit de corps*. Every man for himself and the devil take the hindmost is a too prevalent sentiment, and works to the detriment of all. We are not respected as the profession is abroad, and it is our own fault. In Europe physicians holding hospital or other public service positions are paid, and the public shows them the more respect, knowing that they possess knowledge which is valuable enough to be bought. The following is from the *New York World*:

"The death-rate from diphtheria in this city has continued at unusually high figures ever since last January. It leads the list. The Board of Health, the dispensaries and physicians are all remiss in not taking the proper care to guard against contagion by closer examination and insisting on isolation. Not infrequently a child appears at a dispensary who has no business to be on the street at all, while many physicians are disinclined to call mild but contagious cases by their right names. A study of the mortality reports ought to have a beneficial effect."

Now if city governments or philanthropists would furnish the funds physicians can be had to visit tenements and do just this work which is now expected of them without pay.

The prevalence of diphtheria has given several intubation men a good deal to do, and some report a higher percentage of recovery than last year. O'Dwyer has had excellent results in the treatment of chronic stenosis, and thinks if intubation had proven a failure in croup its great utility in treating this class of cases would have repaid him for all his time and work in developing it. He reported five cases thus treated at the Congress in Washington. The oval laryngeal tubes are not suited for stricture of the trachea. For stenosis the larger tubes are made of hard rubber, the medium sizes of metal with vulcanite head to decrease the weight. Dr. Bernays

of your city has just written to the *N. Y. Record* from Berlin that at the recent Surgical Congress in that city intubation was discussed and favorably thought of.

Cystoscopy is now claiming some attention because of improvements introduced by Nitze and Leiter. When I was in Vienna in 1879, Leiter, the instrument maker, had just perfected his cystoscope, and I had the pleasure of witnessing together with several other Americans a private demonstration of its workings by this ingenious and patiently working gentleman.

Dr. Meyer recently read a paper on the subject at the Academy of Medicine, and an illustrated description of the improved cystoscope may be found in the *N. Y. Medical Journal* of April 21. It seems beyond a doubt that cystoscopy will have a very great influence on treatment of bladder troubles. Obscure conditions can now be diagnosed "at sight." The telescope tube, corresponding to a No. 23 French sound and having a rock crystal window and electric light in the end is passed into the bladder previously cleansed and injected with about five ounces of water, the electric light is turned on and inspection shows the site and nature of the trouble. The orifices of the ureters are plainly seen. Nitze who had done much to bring the instrument to its present state of perfection detected and removed with its aid a silk ligature from the bladder wall of a woman, which had perforated from the tied stump of an ovarian cyst. He reports 16 cases of tumor in which diagnosis was made or confirmed by the cystoscope. Dr. Meyer has detected obscure calculi in a boy's bladder. Dr. Otis reports in the *Record* of May 5 a papillomatous tumor demonstrated by the electro-cystoscope after other methods had failed, and confirmed by suprapubic operation. This is the first tumor thus diagnosed in this country, and confirmed by operation.

Dr. Tilden Brown read a paper at the Academy on Electrolysis in Stricture. He reports six cases treated and observed for some time and concludes that while beneficial in spasmodic strictures it has no beneficial action in true stricture and may act injuriously. Dr. Newman is as enthusiastic over the method as ever, while Keyes has not been able to change his former opinion that it is not a good method. Dr. Burchard has used it in a series of cases and advocated it at a recent meeting of the North Western Society. Dr. Brown's interesting paper containing a résumé of the literature of the subject will be found in the June number of the *Cutaneous and*

Genito Urinary Journal. Dr. Burchard's paper will also soon be published.

At the Manhattan Society Dr. Cheeseman advocated the employment of oxalate of cerium in cough, especially the cough of phthisis. He had carried out a series of experiments at the St. Luke's Hospital which showed that in doses of five grains or more it materially lessened cough. Its benefit is attributed to an action upon the nerve terminations of the pneumogastric.

So much has been written of late about "prairie itch," and pruritus in general that I would like to warn against a too hasty diagnosis in excessive itching of the skin. The more I see of skin diseases the more I am convinced that idiopathic, neurotic pruritus, pruritus hiemalis and pruritus senilis are rare conditions compared with pruritus due to parasites. In two recent cases of persistent itching despite frequent bathing and change of clothing and where *pediculi vestimenti* had not been found upon the vestments or were said not to have been found, I discovered an abundance of nits deposited along the edge of the corset in one case and in the other between the layers of a good churchman's scapular which hung between the shoulders next the skin. When these egg nests were burned and pediculi ceased to hatch out, the previous measures and a dram of naphthol in four ounces of linseed oil well rubbed in at night soon brought the skin back to a healthy state.

It is in some cases quite as impossible to find the pediculus as it is to discover the itch mite in scabies but a thorough search in the seams of undergarments will often bring its reward.

Cerebral Symptoms in the Pneumonia of Children was the title of a paper by Dr. Holt at the County Medical Society. He finds that they are very common. Convulsions at the outset belong essentially to lobar pneumonia. When late convulsions come on, death within twenty-four hours can be predicted. Delirium is seen mostly between the ages of five and eight, with high temperature, but the cases recover. There is no such intimate association between cerebral symptoms and apex disease as has been stated, the author finds, and that nervous symptoms occur much more frequently when the disease is extensive and the temperature high.

Dr. Ohmann-Dumesnil's report of ¹ a case of indigenous leprosy observed in St. Louis, and the first case occurring in the state

¹ Missouri State Medical Association, April, 1888.

tends to strengthen my views as embodied in a paper on lepra before the N. Y. County Medical Society in February last. I then said that our folly in allowing lepers to come to this country would result, (as it has in a number of instances already) in just such sporadic cases. The author agrees with me that it is an infectious disease, but says that it is not logical to argue that isolation should be practised because it is not contagious. I believe firmly that until we do segregate lepra patients such cases will continue to spring up, and although it will be many years before any noticeable increase takes place, lepers wandering at will over the country will be sure to leave a trail behind.

At a meeting of the Lenox club held on the 14th of this month Dr. J. B. White presented a new urethrotome which he has devised to overcome some of the defects of other instruments. It consists of an outer and an inner cannula, the outer terminating in a grooved bulb, the inner running through it and containing a guarded blade. A filiform bougie is attached to the end of the inner cannula, and in this guide the guarded blade is passed through the stricture. The bulb then rests upon the anterior boundary of the stricture, and the guarded blade upon the posterior, and thus the length of the stricture tissue to be cut through is indicated upon the handle, and the blade is withdrawn this distance unto the bulb. Dr. White operated a few days ago on a stricture which would only admit a No. 5 French bougie, passing a No. 30 directly after a bloodless operation and a No. 34 two days later. It is a very delicate and neat instrument, and will soon be published.

Yours truly,

CHARLES W. ALLEN, M. D.

ONE SQUARE MILE of land would give ten thousand families one-twentieth of an acre each and allow for streets. With an average of five in a family this would accommodate fifty thousand souls. Five square miles would provide a twentieth of an acre plot for each family of a quarter of a million of population. And such allotment, besides giving room for a cottage (or a double cottage on two allotments), would by cultivation take in all refuse matters—kitchen slops, excreta, etc.; and so the sewage difficulty would be overcome. With the present and improving facilities for conveying large numbers of people, the carrying of fifty thousand men a few miles out of the city would not be an insurmountable difficulty.—*The Prophylactic* Feb., 1888.

SOCIETY PROCEEDINGS.

ST. LOUIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

Stated Meeting, April, 26, 1888. Dr. W. Coles, President, in the chair.

HABIT ABORTION.

Dr. Scott.—A few weeks ago a lady put herself under my care with this statement: "Doctor, I have been married four years; I have had three miscarriages, and they have all taken place within fifteen months. I am exceedingly anxious to have a child; I am now over five months pregnant, and I want you to take charge of me during my pregnancy. I want to have children." I gave her some general directions, and told her I would call and see her frequently during her pregnancy. A week or ten days after she had been to see me, I was called to see her at about three o'clock one morning. When I went into the room she said, "Doctor, I am afraid I am going to have a miscarriage." I asked her why. She said "well, the waters have broken." When I examined her, I found the bed clothing and night dress saturated, so that she had been awakened by the gush of the waters. On making a vaginal examination expecting to find the os patulous or opening, I was surprised to find the water flowing. Still the os was not dilated at all nor dilatable; it was still firm, and there was no pain. I was inclined to the opinion that I had a case of dropsy of the amnion to deal with. I encouraged her as much as possible: told her I did not think there would be a miscarriage. I stayed by her bedside a couple of hours, and left about daybreak. I called again at nine o'clock, and found her still in the same condition. The next morning I was called to see her and found the os dilating, and I felt then that all hope of preventing a miscarriage was gone, though I did not tell her so. There were no pains as yet. About three o'clock they telephoned me to come to see her, and I found that

she was having some pains. I had asked her several times before if she could feel the movements of the child, and she always told me, yes. Much to my surprise I found the os so much dilated that the bag of membranes protruded through it. I diagnosed a case of footling presentation, and in five minutes the child was born. The child was living and breathed. I cut the cord and put it in an improvised incubator for the purpose of seeing how long I could keep it alive. After caring for the child I went back to the mother. On putting my hand on the abdomen I found it hard and firm; and on making a more careful examination I discovered another child, with its head presenting, and probably in ten minutes that child was born.

Dr. McPheeters.—Was it living?

Dr. Scott.—Both were living when born. I had been mystified to account for the large flow of water which had taken place. Probably there was a division of the amnion and chorion, and each child was in its proper division. The membranes of the child which came first were not ruptured until the membrane protruded through the os. The child which was born last was the one from which the waters escaped first.

Dr. Coles.—Did you notice anything unusual about the membranes? Had they undergone fatty degeneration?

Dr. Scott.—Everything seemed to be healthy.

Dr. Coles.—Was there any history of syphilis?

Dr. Scott.—No sir.

Dr. Boisliniere.—Was the placenta healthy.

Dr. Scott.—Yes sir; perfectly so. I examined it carefully.

Dr. Boisliniere.—There was no fibrinous degeneration?

Dr. Scott.—No sir; I am at a loss to account for this habit of aborting. As soon as she recovers from this abortion I intend to make an examination and try to get a perfect history of the case.

Dr. Lemoine.—How close together did the pregnancies occur?

Dr. Scott.—This is the second time she has been pregnant in a year. She has had four pregnancies and three children born in two years.

Dr. Lemoine.—It might be well to try and prevent pregnancy for a little while.

Dr. Scott.—I am going to try to do that, but it is difficult to do.

Dr. Frank Glasgow.—Last year I had a case which is somewhat similar to the one reported; in that case however there were

not two children, but after the child was born a bag of water presented; there was no second amniotic sac—no second child, simply the remains of the membranes and it managed to retain the waters. I did not understand it at first. There was quite a considerable amount of water retained.

Dr. Coles.—That is sometimes the case, and blood will sometimes be retained in the sac—I have frequently found that to be the case.

Dr. Boisliniere.—Sometimes the source of this watery discharge is very obscure; sometimes it depends on hydrorrhea. The water sometimes oozes between the uterus and the chorion, and the accumulated fluid empties itself a pint at a time. I have had several cases of that kind. Sometimes the child will be carried to full term with proper care under these circumstances, but as a rule the child will be born prematurely. Sometimes the quantity of water passed is very great. I would advise the doctor, if the patient becomes again pregnant to put her to bed and keep her quiet, to use opiates to quiet uterine action and let the uterus remain dormant. I had a case of that kind which was very instructive to me. A young married lady, rather delicate, was five months pregnant, she had lost some blood each month during her pregnancy at a period corresponding to the menstrual epoch: at certain periods she lost a great deal of water and a considerable quantity of blood, although there was no uterine action, no pain at all. The pregnancy went on, and the child was born at the seventh month and is now living. I remember Dr. Pallen stating that he had a patient who knew she was pregnant whenever she began to menstruate, and she only menstruated when pregnant. I would advise the doctor to place his patient on an antisyphilitic course of treatment the moment she becomes pregnant, and keep it up during the whole period. There is such a thing as latent syphilis in the father, and there may be such a thing in this case. There are several ways of acquiring syphilis in addition to improper intercourse, such as smoking the pipe of a man who may have syphilitic sore lips; drinking out of the same cup, etc. It is a horrible custom which obtains in some places of a number of people drinking out of the same cup. A man may have syphilis without any striking manifestations, it is not necessary that he should have a hard chancre.

Dr. Coles.—I will ask if you do not think an accident of this sort may occur in consequence of an inherent thinness and friabil-

ity of the amniotic sac. Don't you find in certain women that the sac is always more or less thickened and in others that it is very thin? For instance we sometimes have great difficulty in rupturing the sac, whereas in other women the sac may be unusually thin.

Dr. Boisliniere.—Was the sac unusually thin?

Dr. Scott.—No sir, I examined it carefully.

Dr. Boisliniere.—That coincidence would hardly occur three or four times, there must be some other cause beyond. There was probably something abnormal about the membrane.

Dr. Scott.—I intended to examine the husband. He is a stranger to me, I never saw him until I met this lady. There is no doubt that very excellent results may be obtained in some of these cases where children are prematurely born from the antisymphilitic treatment, but that is in cases where there is degeneration of the placenta usually of a syphilitic origin. I have succeeded in saving a number of children in this way by inaugurating the treatment early. But in these cases where there are premature births from syphilitic causes the children are not aborted at the same time each time, but each succeeding child is carried a little longer. Perhaps the first is aborted at six months, the next at six and a half, the next at seven and so on.

Dr. McPheeters.—May there not also be some degeneration of the uterine wall, in consequence of which it will dilate to a certain extent and not beyond that, and may not that condition have something to do with the habit of abortions at a particular period?

Dr. Boisliniere.—What the Germans call irregular contraction of the uterus?

Dr. Frank Glasgow.—Was there any extensive or deep laceration?

Dr. Scott.—No, sir, she never had any laceration at all.

Dr. Lemoine.—Had there been a double pregnancy before in this patient?

Dr. Scott.—No, sir, this was the first time.

Dr. Glasgow.—It does not look like a case of syphilis, because in these cases each pregnancy continues later, and finally the child is born at term.

PARALYSIS VS. PREGNANCY.

Dr. Coles.—I would like to report a case which Dr. Boisliniere has seen, and I report it because it is very remarkable in some of its aspects and a very obscure one. It is a case that I saw in con-

sultation this afternoon. The patient is a lady about 28 years of age: she has three children, the eldest being six years old. When her oldest child was eleven months old she found that her left foot commenced to drag when she walked, and it was not very long before she was paralyzed almost completely in her two lower limbs. There was partial paralysis of the bladder and rectum, there was partial paralysis of the vagina, so much so that you could put your fist into the vagina without any difficulty, it was perfectly relaxed. This lady went to various physicians, and I think she went to one or two of our neurologists, and they used the battery on her, etc. She went to Hot Springs. Finally she became pregnant again, and almost from the day she became pregnant she felt a great deal better, she felt that she was regaining the use of her limbs. As soon as the the uterus rose out of the pelvis she could walk perfectly well and enjoyed excellent health. After the birth of the second child she again lost the use of her limbs, and in this instance she suffered violent, aching pains in the calves of her legs and pains occasionally shooting up to each hip, something like sciatica. She became pregnant a third time, and from the day she became pregnant she felt better again. As soon as she missed her menstrual period she felt better, she regained the use of her limbs. This time she had a miscarriage about the fourth or fifth month, and had a good deal of trouble, she had some cellulitis following this accident which confined her to her bed some time. She got over it, however, but suffered more or less weakness and pain in the lower limbs. She then became pregnant a fourth time, and the physician who had charge of the case, and who has been the family physician for the last four years, although in the meantime he has been around in various places, to Hot Springs and so on, told her that as she was so much better during pregnancy that the best thing she could do was to get in that condition again, and sure enough in a few months she became pregnant. That child was carried to term. She had had two miscarriages and carried three children to term in the last six years. Her youngest child is about a year old now. She got along very well after the birth of her last child. During her pregnancy, and for eleven months subsequently she regained the use of her limbs, and she has had perfect use of them until within the last six weeks, since which the paralysis is returning. She feels weak in both limbs but especially in the left, which she cannot raise from the floor. She seems to be in perfect health other-

wise. I made an examination to-day, and found nothing wrong about the uterus except some laceration and sub-involution.

Dr. Boisliniere.—Did you find a retroversion?

Dr. Coles.—No, sir, I found it normal, the neck is long and the cervix is enlarged, there is no double laceration of the cervix, the cicatricial material of the cervix is not particularly marked, but there is evidence of laceration, the depth of the uterus is about three inches, there is no special tenderness about the uterus. In other words, there is nothing in the condition of the uterus that leads me to think that an operation for the laceration would be of any special service, yet she was told a short time ago, while at Hot Springs, by a prominent medical man who examined her, that she had laceration and sub-involution, which was the result of the miscarriages, and probably, laceration occasioned in the first labor, and that the increased weight of the uterus pressed in some way on the pelvic nerves, producing this trouble, and he advised that she be operated upon, and it was with a view of performing some operation that I was called to see and examine her.

After making the examination I said to her, "Madam, you undoubtedly have some laceration, but I do not find a condition of your uterus which is sufficiently morbid to lead me to promise you a favorable result as the consequence of an operation. I think if you are operated on the uterus will gradually grow smaller. That is usually the case if the operation is successful, the congestion of the uterus becomes less, the involution becomes complete, but whether it will have any decided or beneficial effect upon these paralytic symptoms is something that I would not like to promise in advance." The queer point about the case is that as soon as she becomes pregnant, she is relieved of these paralytic symptoms almost entirely. Not only is she relieved of the paralytic symptoms, but relieved of the pain in the limbs, and when these symptoms are at their worst there is not only a paresis, but there is motor insensibility in the limbs, all the way down, but particularly from the knee down. There is nothing in this case which would lead one to think that there is any notable hysteria in it. She is a particularly strong and robust woman. She says she has never had hysteria in her life. When she is pregnant she says she feels as well as anybody,

• *Dr. Gregory.*—Is there any eversion of the neck in this case?

Dr. Coles.—No. The neck is larger around the rim of the cer-

vix than it is higher up, what Emmet has described as hog-nosed neck, but there is no marked erosion of the cervix, there is, however, a feeling of the anterior lip as though there was a small fibroid in its centre.

Dr. Gregory.—The reason I ask the question is that I never advise an operation where there is no eversion of the neck, only a simple laceration. I see these cases constantly, they come to me from all around the country to be operated on, and I send them back. But I occasionally see a typical case where the operation seems absolutely necessary.

Dr. Cole.—So far as the nervous symptoms are concerned I do not know whether we can promise much or not. At the same time there is a peculiar and remarkable connection between the uterus and the nervous system, in this case.

Dr. Frank Glasgow.—I think the case may be explained in another way. There may have been originally a myelitis or polio-myelitis, and the woman might naturally recover in time. She might partially if not completely recover from this paralysis. In these cases there is a local anemia of the cord due to the pressure of effused products of inflammation or to obliterated vessels. Now, it has been recommended in paralysis due to lesions of the cord (I mean late in the disease) that we give strychnia in order to increase the circulation in the cord. Pregnancy might act in the same way as strychnia does. The lesion may be low down, and it may participate in the increased supply of blood. I recollect a case reported some two or three years ago in New York—a case where there was as much paralysis as in the case which Dr. Coles reports, and the symptoms entirely disappeared on repairing the lacerated cervix. I think it was Mundé who reported it. The operation was done not because they expected a cure of the paralysis, but simply because the lesion was there and they did not know what else to do.

Dr. Boisliniere.—What was the result?

Dr. Glasgow.—The disappearance of the paralysis. Of course those are cases in which we can never predict what will happen. In those cases in which the doctor speaks of, in which the cervix is hog-nosed, that is larger at the extremity than further back at the vaginal junction, it seems to me that that shows that there is an interference with the circulation, some constriction back of the lacerated portion of the cervix causing this nodular condition. I do not

think the condition of the uterus has any influence on the paralysis, but I think it would be well to operate and see what the effect will be.

Dr. McPheeters.—The doctor has certainly reported a remarkable case, and one difficult to account for, but then we often meet with cases that we do not understand: at least I do. In this case it is possible that an operation might do good, but if the paralysis is relieved during pregnancy I do not see how the theory of pressure can explain it, since both the hyperemia and the pressure during pregnancy are greater than in the non-pregnant state. During the early months of pregnancy, before the uterus rises out of the cavity of the pelvis, the pressure on the nerves would certainly be greater than in the unimpregnated state. I confess that none of the explanations which have been offered are to my mind satisfactory in view of all the facts mentioned by Dr. Coles.

Dr. Coles.—There is another point in connection with the history of the case that I did not mention, and that is that for a certain time after her labor she is free from these symptoms of paralysis, during most of the period of lactation she is free, showing that there must be some reflex action.

Dr. McPheeters.—Have you excluded hysteria entirely?

Dr. Coles.—I do not know that I can say that. If she has hysteria, the usual hysterical symptoms are not very prominent. I never saw the patient until this afternoon.

Dr. Lemoine.—Does she lose these symptoms immediately on becoming pregnant, before the uterus rises?

Dr. Coles.—Yes sir, she has come to know and suspect pregnancy on account of the feeling in her limbs and ability to walk.

Dr. Scott.—I should be very much inclined to think it is a case of hysteria and treat it as such.

Dr. McPheeters.—If that be so, an operation could only act by its impression on the mind.

Dr. Boisliniere.—When you once tell a patient that she should be operated upon, very often she will not rest until it is done.

FLOATING KIDNEY.

Dr. Gregory.—I often see such cases. On last Saturday I saw a patient who was operated on a year ago for ovarian tumor at New Orleans. During the last five or six months she has had some intestinal symptoms, a little uneasiness in the bowels. A doctor who examined her, told her that he was satisfied there were some

adhesions that involved the intestines, and she came up here to me to be operated on for these adhesions. I did the best I could to persuade her against having any operation performed. I remember a case of a very intelligent widow who four or five years ago consulted a physician for what she supposed to be a tumor in her belly, and I was called to examine the case with him. I said to him I would let the matter alone. The patient, however, said she was satisfied that she could never get well until she was operated upon, so I told the doctor to operate by all means. We took her to the hospital and cut her open, and found that the tumor was a floating kidney, and we manipulated it a little, we did not take it out, and sewed her up, and she recovered and has not complained since.

Dr. McPheeters.—Did you try to confine it to its place.

Dr. Gregory.—No, it has disappeared and we cannot find it.

Dr. Glasgow.—Why should it not have been attached to the abdominal wall?

OVARIOTOMY—SHOCK—DEATH.

Dr. Gregory.—It may be that the manipulations led to adhesions. She got well and had no further symptoms of the tumor after the operation. I think many of these patients are improved by the impression made by the operation. In the absence of any other reports of cases I will report a very imperfect one. It is a disastrous ovariectomy which occurred to me last Saturday. I operated upon a woman last Thursday, Dr. Moses assisting me. The cyst was an immense one. It seemed to be a single cyst before the operation, but after the operation there were a number of small cysts within a larger one. I cut down upon the cyst and found that it was very thin. I put my finger in, as I always do to feel for adhesions, and I found then in every direction, and in detaching a little slight adhesion the sac ruptured. It was the thinnest sac I ever saw, not thicker than blotting paper and nearly as rotten. Well the patient was turned on her side, as we usually do, to allow the water to run out, to prevent it running into the abdomen. The fluid was perfectly clear, just like water coming from ascites. As the woman lay on her side and the water was dribbling away, I took my knife and cut the cyst, making the opening larger so as to let the water pass out freely and rapidly, and the cyst was emptied in due time, and after it was emptied my assistant put in his hand and seemed in doubt whether it was a cyst at all. I concluded I had better enlarge the opening, if the cyst was going to be trouble-

some to get out, and I enlarged the opening, put my hand in and seized the cyst and drew it out from behind, inverting it. The adhesions are nearly always most in front. As a rule there are few adhesions behind. I drew the cyst out, and by detaching the few adhesions finally succeeded in enucleating it, but it took a long time. We tied the pedicle and were mopping out the patient's belly, and as the operation had been protracted and the pulse was weak we gave some injections of brandy, but about the time we were ready to close the abdomen down about the lower lumbar vertebræ there was a considerable oozing of blood not connected with any of the vessels which we had tied, but from a point about where the vena cava begins, just about the junction with the common iliac veins. There seemed to be a bulging of the peritoneum at that point, there was a mass as big as my thumb, and we seized the summit of this bleeding projection and tied it. The parts were cleansed and the woman put to bed, she had a weak pulse, but was breathing well and we thought she promised to react, but she never did. She died about two o'clock Saturday morning. The woman was perfectly conscious, she talked very rationally and was warm all over, but her pulse was feeble, scarcely perceptible. I did not make a post-mortem. The uncomfortable thought which follows me is simply this: was it a case of rupture of the vena cava?

Dr. Dorsett.—What could have ruptured it?

Dr. Gregory.—There comes the point. We read that the sudden removal of pressure produces a shock. I do not know whether the gentlemen have read it. I remember when I was a student of reading that the sudden removal of fluid from the abdominal cavity would cause rupture of the abdominal veins. Now what did I do in this case? I opened the sac and let the water flow out rapidly, and I did regret that I did it, for the reason that I believe there was a rupture of the vena cava. Whether the rupture occurred from the sudden removal of the fluid, of course we cannot tell. I know however that I am sorry I did not let it dribble away.

Dr. Coles.—How were the external veins on the abdomen?

Dr. Gregory.—They did not attract my attention.

Dr. Lemoine.—You could hardly call that a sudden evacuation.

Dr. Glasgow.—How were the mesentery and internal veins?

Dr. Gregory.—It may have been some other veins, but it was

behind the peritoneum, and I thought when I first saw it that it might be the vena cava. I remembered what I had read, but I did not believe that veins could be ruptured in that way. Since this patient died I have been thinking a good deal about the matter. The woman was in a very good condition at the time we operated; and after the removal of the fluid her pulse fell so much that we gave her brandy injections. Now whether the sudden removal of this fluid brought on what is called shock—whether the sudden removal of the pressure under these circumstances can superinduce shock or not, I can not say. I have thought a good deal about this matter. What do we mean by shock? We know the condition that we call shock is characterized by extreme prostration of all the forces of the body. Now any agency that will shock the body will kill the body, so that shock is a condition short of death—that is what it means. It is simply a condition of the body just short of death. Now, what occurs in death? The circulation ceases upon the surface of the body, and the blood retreats and fills the larger vessels of the trunk. Necessarily there is no circulation on the surface; there is hardly any pulse, so that arteries as large as the radial artery do not circulate any blood; all the blood is in the interior, and distends the large blood vessels. That is the condition of shock. Now this patient was in a state of shock before her abdomen was closed. She was almost pulseless, and while she was in this state the hemorrhage began. Assuming it to be a vein which was bleeding, it began when all the blood had ceased to move in the peripheral portions of the body, and was stagnant in the interior of the body, and it has occurred to me that perhaps this sudden removal of the fluid caused a condition of shock—a distention of the blood vessels in the interior of the body, caused a rupture of the vessel. I believe that this thing must have been observed—this rushing of the blood into the interior vessels, distending them and even rupturing them, or the caution to be very careful in such cases would not have been written; just as I read in the books that there is a condition of dislocation of the thumb in which it is impossible to reduce the dislocation without cutting down upon some muscles, and I never saw a case for a long time, but one day I did meet with just such a case. So I am inclined to think it may be in this matter. There is one thing that consoles me in this case, that is the patient had been tapped a number of times, and it occurs to me that the tapping would accustom her to

the removal of the pressure, and she would be less likely to suffer shock.

Dr. Coles.—If it had been the vena cava, would there not have been a larger amount of hemorrhage?

Dr. Gregory.—There was a very small opening.

Dr. Coles.—Was her death at last rather sudden?

Dr. Gregory.—No; she never had a good pulse from the time of the operation until her death. We gave her milk and brandy, and brandy injections, and gave her digitalis and hypodermic injections of morphine. On the first night she did not sleep a wink; she was restless, and the next morning we gave her a hypodermic injection of one quarter of a grain of morphine, and she slept a good deal during the day, and the restlessness ceased.

Dr. Coles.—Your case reminds me very much of one I met with some years ago. In my case there was the largest cyst that I have ever seen. I suppose there were nearly sixty pounds of fluid in it, and the adhesions were so close over the front of the abdomen that in making my incision I could not tell when I cut through to the cyst, and the first thing I knew the cyst ruptured. The fluid was perfectly clear, but it was a little straw-colored, and there were adhesions in every direction, especially in front. This patient did well until the 14th day; the stitches had all been taken out. On the fourteenth day she suddenly complained of nausea, turned her head on one side, and died in fifteen minutes. There was hemorrhage into the stomach in this case.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated meeting April 3, 1888, DR. DEAN in the chair.

GALL STONES.

Dr. Lemen presented a specimen of gall-stone, and said that it was removed post mortem, and was composed of cholesterin. The gall bladder was also shown, which was so occluded that it contained only a small amount of liquid that looked like synovial fluid. The patient from whom the specimen was removed, had been suffering for years with what she termed bilious attacks. Was called to see her about two or three weeks before she died, and she had then been vomiting for about a week or ten days, and

was so reduced that she seemed almost starved to death. Feeding her by the rectum by injections of peptonized beef was tried, but it did not seem to nourish her at all; she never regained her health but died in a comatose condition.

She was forty-nine years old and had apparently considered these bilious attacks of little consequence, not consulting a physician about them.

RUPTURE OF BICEPS.

Dr. Homan presented a patient and gave a history of the case (vid. p. 59.)

He said that he had looked up somewhat in works on surgery the frequency of occurrence of this injury, and found that it was rather rare.

Dr. Todd remarked that this was an extremely interesting case. We are able to determine from this man the special function of the biceps muscle. He flexes his forearm really by the action of the brachialis anticus. It is the only pure flexor of the forearm; it has no other function. We find on examination that this patient's power of supination in the injured hand is very much interfered with, whereas, in the left hand it is quite strong, and that, in connection with the swelling on the outer half of the biceps shows plainly enough what the injury must be. The biceps is one of the most interesting muscles of the body on account of its complex action. There are very few cases on record of injury to the long head of the biceps. He had looked up that matter himself very thoroughly some years ago; had found in the dissecting room same cases where the biceps had been frayed through in rheumatic troubles of the joint. The biceps in these cases is subjected to considerable friction, if any roughening occurs about the bicipital groove. One winter he had found seven specimens where the long head of the biceps was partially frayed through. The mechanism by which supination is effected by the action of the biceps muscle is a very beautiful one indeed.

Dr. Homan asked *Dr. Todd* his opinion as to how this injury occurred, whether it was by the muscular action, or the direct effect of the fall. The sudden, violent contraction of the muscle in the man's attempt to save himself from the fall might have caused the injury, but the views of *Dr. Todd* were desired in regard to which he thinks most likely to have been the cause of the trouble.

Dr. Todd in reply was rather inclined to think that the injury

was the result of the fall, that either the long head of the biceps was ruptured by the shoulder coming in contact with the ground, or that the tendon was loosed from its attachment at the acromial process.

Dr. Homan suggested from the amount and appearance of the deformity present that the tendon was torn from the belly of the muscle.

Dr. Todd said it would be pretty hard to determine that point, whether it was the tendon which was torn, or whether the muscle itself was lacerated.

Dr. Dean thought it might be possible by the muscular effort being exerted in one direction, and the sudden blow which was received by his shoulder coming in contact with the ground, thus causing two forces acting by different means and in different directions, a rupture of the muscle might have occurred.

Dr. Homan remarked that certain muscles of the leg were more subject to rupture than others, the muscular attachment giving way; and not the tendinous attachment to the bone.

Dr. Todd said that was due to muscular action, and that if a man is thrown on his shoulder and the bone is forced out of place considerable tearing is apt to take place.

Dr. Homan replied that while this was very true still the sub-glenoid dislocation is probably the most frequent from an injury to the shoulder joint in which the long head of the biceps is apt to be injured, and was inclined to the opinion that the belly of the muscle was ruptured, and that the tendon was not torn loose from its attachment at the top of the shoulder.

Dr. Dean observed that some cases have recently gone through the journals showing that toes have been torn out by force: in these cases the muscles were ruptured. He remembered a case at the City Hospital, in which was diagnosed dislocation of the long head of the biceps. Quite a long report was written out by one of the physicians, and it was intended to publish it, but as the man was expected to die from consumption in a short time, the report was withheld in order, if possible, to make it complete by a post-mortem. When the man died, it was found on dissection that there was no dislocation at all.

Dr. Nelson read a paper on

THE RESPONSIBILITY OF THE PUBLIC TO THE INDIVIDUAL AS REGARDS INFECTIOUS DISEASES. VID. MAY COURIER.

Dr. Homan said the subject was certainly one of the utmost importance, and that prompt and proper action upon it is one of the greatest needs of this city and state, and in fact of every city and state. But few cities, large or small, have provided any isolation hospitals such as referred to in this paper. In case of small-pox, especially in this city, it seems improper to haul patients 14 miles during severe weather in a wagon. This matter has been dwelt upon in this society before, and he thought if nothing better could be done, that the scope of the quarantine and small-pox hospital should be enlarged to include these diseases that are more dangerous than small-pox, and possibly more infectious, and against which the means of defence are not so palpable. Just how to go about it to arouse public sentiment, he was at a loss to suggest; but something should be done to provide such a place for transient guests at hotels, or other strangers visiting the city, so that they may be cared for in case the need arises. He would, therefore, move the appointment of a committee to devise a plan for the accomplishment of this object.

Dr. Lemen said the subject on which *Drs. Nelson and Homan* have spoken is a very important one, and was considered to a certain extent during the epidemic of diphtheria here last fall, when it was at its worst; and the City Board of Health had thought of getting a hospital, which had been done before, and establishing a ward for the treatment of diphtheria; but the municipal assembly did not seem inclined to help in the matter and, of course, nothing could be done. He thought, perhaps, if some of our public spirited citizens' attention was called to the matter, that it might be given a start.

ERRATUM.—By some delay for which we were not responsible the proof of *Dr. Carson's* paper was not received back from him until after the pages had been struck off. On p. 5 for *Van Erekitan* please read *Van Erckilan*.

The table at bottom of same page should read as follows:

	Operations.	Recovered.	Died.
After Amussat's method,	23	20—87 per cent.	3—13 per cent,
After Littre's method,	34	31—91.2 per cent.	3—8.8 per cent.

ST. LOUIS COURIER OF MEDICINE.

VOL. XX.

AUGUST, 1888.

No. 2.

CASES FROM PRACTICE.

THREE CASES OF FIBROIDS OF THE UTERUS.

BY FRANK A. GLASGOW A. M., M. D., *In Charge of Women's Department, St. Louis Mullanphy Hospital, Lecturer in Gynecology, St. Louis Medical College.*

[*Read before the Medico-Chirurgical Society, May 15.*]

The three cases of fibroid of the uterus which I report to-night are presented for various reasons. The first on account of the unusual combination of carcinoma and fibroid, and also on account of the lack of symptoms pointing to fibroid.

The second case lacks also many symptoms usually ascribed to fibroids and is also a rare case, as it is a fibroma originating in the cervix.

The third case is reported more on account of the result, and to show the effect of treatment, than on account of the rarity of the case, similar cases almost invariably proving fatal.

CASE I.—Fibroids and carcinoma of uterus.

Nov. 7, 1885, Mrs. B. German, age 36 years, widow nine years. Two children, the last 16 years of age. First labor hard, second easy. Has had five or six miscarriages, the last nine and a half years ago. Patient suffered much from nausea and vomiting when pregnant; hence took medicine and caused miscarriages. All miscarriages were before the fourth month. Her menses were regular, every four or five weeks until August 7 of the present year.

Since April last she has had at times a slight bleeding and a watery discharge. Since August 7 she has had a discharge continually. This varies; at times blood, then a very offensive watery discharge, and sometimes pus. She has had no flow which looks like a menstruation since August 7 and possibly not since May. She has pain in sides on jolting.

Bimanual examination: Tenderness of cervix and neighboring parts. Cervix bilaterally lacerated, hard, nodular and covered with brittle granulations. The cervix is not freely movable. The vagina very slightly involved. There is a very hard tumor posterior to cervix in the hollow of the sacrum, nearly as large as a fetal head. This is very sensitive, and is probably the fundus. The discharges are bloody with sago-like debris. General appearance good. Dyspepsia, constipation, no cough.

Dyspnea on ascending stairs, passes urine once during night.

Diagnosis, carcinoma of cervix uteri and probably of fundus.

A later and more thorough examination showed the fundus just above the pubes and a firm hard rounded movable mass in the fundus to the left of the median line, and about the size of a large egg. Depth of uterus $3\frac{1}{4}$ inches. Diagnosis, carcinoma of cervix uteri and fibroid of fundus,

It was decided to operate for the removal of the malignant trouble although the prognosis was not good.

Nov. 12. I removed the whole cervix and curetted thoroughly as high as the os internum. I found a small fibroid about the size of a large cherry in the cervical wall just below the internal os. This I enucleated.

The large fibroid in the fundus was not disturbed. The disease recurred in about two months, and progressed as all such cases do. A very severe hemorrhage occurred Feb. 28, leaving the patient pulseless. This was checked by hot alum water and subsulphate of iron injection to the vagina. Brandy and atropine were given hypodermically, but no ergot.

This patient lived until Sept 28, and died extremely emaciated and very gradually.

Never was there any evidence of the fibroid's being a factor in causing hemorrhage. Hot alum or subsulphate of iron water always sufficed until the day of her death to still the hemorrhage, which to my mind proves that the fibroid took no part in causing hemorrhage or death. The patient never had, previously to com-

ing to me, any symptoms (except profuse menses) which could be ascribed to fibroids, and this in spite of there being two fibroids, one certainly interstitial.

CASE II. Mrs. O. H. W., Ohio, age 54 years, married 39 years. Ten children, last nineteen years old. Labors hard; two miscarriages at three months caused by falls; last eleven years ago. Duration of present illness eleven years. Catamenia commenced at 12 years of age and ceased three years ago. They had been regular, very painful and profuse lasting seven days. At present there is no leucorrhea. Examination shows by vaginal touch a large, irregular, round, very hard mass the size of a seven months fetal head in the posterior portion of the cervix. The tumor is very slightly movable. The anterior lip merges into the vagina. The cervix and tissues surrounding tumor are slightly sensitive. Fundus uteri is anterior. A sound can be passed around the tumor into the cervix to the fundus. Depth of uterus three inches, slight obstruction from irregular canal.

General appearance of patient, healthy. She has constant cough, constipation, palpitation at times. Urination is very frequent during the day, she seldom rises at night; has burning pains on micturition; urethra congested and sensitive.

Diagnosis, fibroid in posterior lip of cervix uteri about four inches in diameter. The patient had been examined by a number of physicians in the large cities of Iowa, some of whom told her that she had retroversion of the uterus, and others assuring her that she did not have a tumor, as she thought. Her only symptoms were vesical and rectal tenesmus.

The treatment required in this case was plain enough.

June 18, under strict antiseptic precautions, the tissues over the tumor were incised. The tumor was firmly adherent to the surrounding tissues, and it was only with difficulty that it was enucleated. The cavity was packed with sublimate gauze. The patient recovered rapidly without a bad symptom. All her vesical and rectal trouble disappeared promptly. This patient never had any hemorrhages (except profuse menstruation) nor any pain such as would accompany the spontaneous enucleation of a fibroid from the body of the uterus. Her menses ceased normally, though rather late in life. I cannot believe that this tumor ever originated in the body of the uterus, which Winckel suggests as the explanation of cervical myomata. He states that he has never seen in the living or dead

subject a primary cervical myoma. Schroeder reports eight per cent of all myomata as cervical. Virchow states (see Winckel: *Diseases of Women*) that cervical myomata are not firmly attached to the surrounding tissues, and hence are easily enucleated. This was certainly not the case in the above reported case.

CASE III. Mrs. J. was placed under my care by Dr. L. Ch. Boisliniere, with whom I consulted from time to time. American, age 24, married six years, two children, youngest two and a half years of age. Catamenia appeared at 12½ years of age. Menstruation up to last pregnancy had been regular and free, accompanied with pain in small of back. Duration of menses before marriage six days.

The after-pains with last parturition were very severe, and had to be relieved by medicine three days after birth of child. The patient arose from bed on the eighth day. Three months after the birth of the last child (viz., 27 months ago) the menses appeared once, and again three months later. Five months later they returned, and have continued regularly every four weeks, but very profuse, up to the present time. On the re-establishment of menstruation the patient noticed a lump about the size of an orange in the right ovarian region. This tumor, which was very sensitive, appeared about ten days before each menstruation, and disappeared after it had ceased. She suffered very much during the flow from pains low down in the pelvis and in the back.

Fourteen months ago the tumor was noticed during the intermenstrual period, and was larger than when first felt. Eleven months ago a watery discharge, having a strong ammoniacal odor, followed the menstrual flow. This continued until she began taking ergot two months ago. The patient has had very frequent micturition for the past two years, no pain after or during micturition. She has also suffered from a severe pain in the lumbar region of the back for the same length of time. Two months ago she began taking ergot, which caused severe cramps accompanied by nausea and vomiting. The duration of her monthly flow had gradually increased, until it lasted two weeks at the time of commencing the ergot treatment. Since this time the flow has been almost continuous.

Present condition. Patient is short in stature, rather stout, very anemic and very weak. The abdomen is distended by a large tumor reaching to the umbilicus. Circumference at umbilicus

37½ inches. Cervix uteri behind pubes; it is shortened but not dilated. The abdomen is very sensitive.

Diagnosis.—Fibroid of body of uterus, submucous. The general condition of the patient was not such as to promise much from an operation, so we decided, in spite of the general sensitiveness (parametritis) to try electricity. She was unable to bear even as much as five milliampères, so the treatment was not persisted in, as we could not hope to accomplish anything. We were somewhat in a quandary. We did not believe that the patient would survive an operation for the removal of the womb: the tumor appeared too large to pass through the pelvis, and we could not use electricity on account of the inflammatory condition present. We decided to use ergot and trust to getting the tumor through the pelvis. The patient was at this time receiving general tonic treatment and bromidia at night. The first dose of ergot, April 21, of Squibbs, fl. ext. ʒij, per rectum caused severe cramps and vomiting within fifteen minutes after administration. The cramps were relieved by opium, but the vomiting lasted three days.

April 29. Commenced to use sponge tents containing iodoform in cervix each day. Fl. ext. ergot gtt. v. three times a day.

May 12. 4 P. M. Temperature, 102°, symptoms of pelvic cellulitis. Ceased using tents.

May 13. Vomiting. Stop ergot. Give quinine gr. xv in enema twice a day.

May 14. Temperature, 100°. Bloody discharge; some pain in abdomen.

May 18. Strong pains continue.

May 20. Commenced to use tents again.

May 27. Cervix well dilated. Depth of fundus, 5¾ inches. The sound takes a spiral course. The tumor is to right and posteriorly. Foul discharge. Iron to fundus. Fl. ext. ergot gtt. vi three times a day.

May 28. Very weak. Vomits much; severe pain; stop ergot.

May 30. Used Barnes' dilator.

From June 3 on ceased to dilate except occasionally, and have used ergot and quinine alternately, according to the condition of the stomach. Began to wash out fundus with Labarraque's solution ʒi to O ij once a day. Flows continually.

June 11. Measurements:

Rt. ant. sup. spine to umbilicus $6\frac{3}{4}$. Circumference at umbilicus 29 inches.

L. ant. sup. spine to umbilicus $6\frac{1}{2}$; April 21 it was $37\frac{1}{2}$.

Pubes to umbilicus 7.

Pubes to ensiform cartilage $12\frac{3}{8}$. Circumference one half way between pubes and umbilicus viz., centre of enlargement 31 inches. Notice. The largest circumference had descended.

June 13. Temperature 104° . From this date until July 11, the cavity of the uterus was washed out twice every day; the fluid used was mercuric chloride $\frac{1}{24000}$, sometimes stronger, but generally Labarraque's sol. $\frac{1}{2}$ to Oij containing enough potass. permanganate to color the water deeply was used. Until June 18 the temperature fluctuated between 100° and 104° . The discharge was profuse, purulent and offensive.

June 18. A large thin piece of putrid material (the size of the palm of the hand) was passed.

June 19. Temperature 100° , not so much discharge. Depth of uterus $8\frac{1}{2}$ or 9 inches.

June 20. No fever.

June 21. Chill and high fever, 104° . The fever now continued, sometimes reaching 103° , until July 6, when another smaller piece of tumor was passed. The cavity contained a great quantity of pus.

July 11. No fever since the ninth, the discharges still offensive. Wash out cavity now only once a day. Stomach quiet; hydrastis Canadensis gr. iij three times a day in capsules.

July 13. Tendency to bleed; pains in uterus from hydrastis; no nausea; rheumatism in ankles.

July 17. Feeling very well except that the feet are very painful, good appetite; no nausea; very little discharge, and that yellow and inodorous; fundus not so sensitive; depth of uterus $3\frac{3}{4}$ inches; uterus by bimanual examination broad and probably not more than $4\frac{1}{2}$ inches deep; infiltration to side and sensitive.

July 21. No discharge.

July 24. R. ant. sup. spine to umbilicus $5\frac{3}{4}$ in.

L. " " " " 6 in.

Pubes to umbilicus $6\frac{1}{2}$ in.

Circumference at umbilicus $26\frac{1}{2}$ in.

Circumference half way between umbilicus and pubes 27 in.

Feet much improved, good appetite.

July 25. Patient discharged well as to her uterus but still suffering from rheumatism. This prevented her from walking for another two months. The patient remained free from uterine pain until Aug 8. At this time pains came on and lasted until Aug 12, at which time, while under the influence of opium, the menstrual flow began, and the pains ceased. From this date up to the last report Feb. 24, 1888, she has had a regular painless flow, lasting three or four days.—Ten days after the flow ceases there is a scanty brownish discharge not accompanied by pain and lasting two or three days. This seems to weaken her, otherwise she is in perfect health; 21 inches about waist (natural size) weight 120 pounds. This result must be considered highly gratifying, as sloughing fibroids of this size are almost uniformly fatal.

The tumor did not come away in masses (with the exception of two comparatively small pieces) as is usually the case, but was liquefied. The intolerance of the patient to ergot even in minute doses is noteworthy.

The hydrastis was well borne, and caused good contractions, but the better condition of the uterus may have had something to do with this. The increase in the depth of the womb from $5\frac{3}{4}$ inches on May 27 to 9 inches, on June 19, as the tumor was being separated from the wall, and the decrease to $3\frac{3}{4}$ on July 17 are interesting to note.

It is well to contrast the circumference of the abdomen at different periods:

May 22, $37\frac{1}{2}$ inches.

June 11, 29 “

July 24, $26\frac{1}{2}$ “

Feb. 24, 1888, 21 inches at waist.

Now I will add a few words in regard to the manipulations and apparatus used in dilating cervix and washing out the cavity. The iodoformized sponge tents used, I made myself, mixing iodoform with the mucilage in which the sponge was soaked before wrapping. This removes a very serious objection to sponge tents, as the pus in the interstices will not decompose and cause sepsis. I think that it would be well for dealers to supply such, each one being wrapped in paraffin paper. The solutions used in washing out the cavity were mercuric chloride (Hydrarg chlor. corros.) $\frac{1}{24,000}$ varied with Labbarraque's solution $\frac{5}{1}$ to Oij with enough potas. permanganate to deeply color the water. A mixture of iodoform in glycerine

and also in oil was used several times as an injection, but abandoned for various reasons.

As for the instruments used, I found that a flexible double cannula was needed, which I made in the following manner.

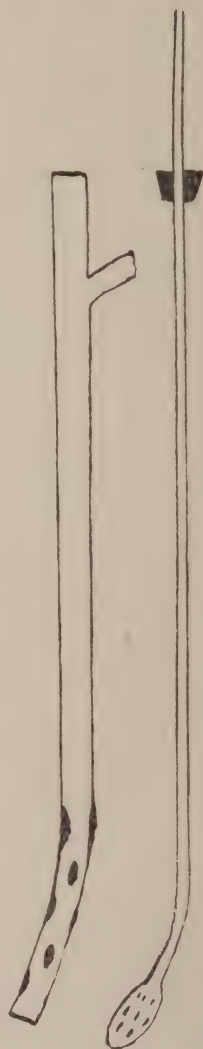
The extreme tip from the eye end of a gum catheter 9 mm., diameter, probably No. xviii, was cut off, also about two inches from the open end. Holes were now cut in the eye end of the same size as the eye.

I now introduced a small gum catheter far enough to allow the eye to project beyond the large catheter. Over the open ends of both catheters was slipped a pure gum tube, the end of the small inside catheter being brought through a slit in the tube.

Water would now pass through the small catheter into the uterine cavity and out through the large tube.

This arrangement worked very well, as it would pass around the tumor up to the fundus, which my metal cannula (described below) would not do, and prevented any intrauterine pressure. I found that after the uterus was apparently clean I could get pus and debris by introducing a gum catheter with the stilette in it (slightly curved) and turning this stilette, thus causing the catheter to sweep around the tumor. This showed that there were collections of septic matter entirely out of reach of either a rigid instrument, or of one which could not be guided. In this case a tube was attached to the catheter, and the stilette passed through the side of the tube.

I will take this occasion to describe the metal cannula above referred to, as I have never published a description of it. I presented it before the St. Louis Obstetrical and Gynecological Society last year. I devised this cannula on account of a great defect which I have observed in all cannulæ which it has been my fortune to see



Half actual size.

or hear of. I refer to the difficulty or impossibility of cleansing them thoroughly. Keeping this in mind I made my cannula to consist of two pieces without any crevices or movable parts. Every part of the instrument except the cavity of the inner (or clean water) tube can be inspected by the eye. It can be thoroughly and quickly cleansed by shaking it in a basin of water. The outer tube is open at both ends (being of course fenestrated,) and has a short tube let into the side for the discharge. It is $\frac{5}{16}$ inches (8mm.) in external diameter. Eight and a half inches (21.45 cm.) long and slightly curved at its fenestrated end. The edges of the end near the fenestra are turned in a very little, not enough to form a ledge.

The inner cannula has an olive shaped tip (perforated) which passes half way out of the outer tube closing this end. The other end of the outer tube is closed by a cone shaped projection on the inner tube. I prefer to close this end, so that suction can be made after the method of Dr. E. C. Gehrung of this city (St. Louis).

The inner tube is $10\frac{1}{2}$ inches long. This instrument I had made for post partum cases; the size, of course, can be varied. This instrument was made for me by Messrs. A. S. Aloe & Co., of this city.

FIBRO-CYSTIC OVARIAN TUMORS.

BY G. T. BARTLETT, M.D., POPLAR BLUFF, MO.

[Read before the Southeast Missouri Medical Association, Fredericktown Mo., May, 1888.]

Mrs. B., aged 31, married at 16, March 23, 1873. A child was born Aug. 4, 1874. Was a widow for several years. Married her present husband February 11, 1884. In one month she thought she had conceived, as she felt a tumor or enlargement in her abdomen about the size of an egg, and had sick stomach generally of mornings. Though she menstruated regularly, she thought nothing of this, as her mother had informed her that some women had their menses regularly during the whole time of pregnancy. She made all the necessary arrangements for confinement in the way of toilet and ward-robe for self and child. The abdomen continued

to grow rapidly until September, when she was taken with bearing down pains, like those of labor attended by profuse hemorrhage. Medical aid was called, and medicine administered which checked the hemorrhage and supposed labor pains.

The attending physician diagnosed the case as a threatened premature labor. After this the patient continued to menstruate regularly and irregularly for two years with now and then pains threatening labor, and with hemorrhage. For two years past she has only menstruated two or three times.

For several years the patient has been very much annoyed with prolapsus uteri, so extensive that the whole organ at times passed without the labia.

For about three years the patient has taken the counsel of many physicians, and she states that as a general thing they have made the diagnosis of *extra uterine-fetation*.

March 28 last, the patient in company with her husband first called at my office for treatment, from whom I then gained the facts just set forth. She was not so dressed as to allow of a thorough examination, which was accordingly deferred to the next day, when at her home I made a minute examination. I first found a *prociencia uteri*, the os being closed. I replaced the uterus without trouble. Examination *per vaginam* and *per rectum* discovered beyond a doubt a movable growth large enough to well fill the whole pelvis, displacing the uterus, bladder, and rectum, and interfering with their functions. This irregular mass in the abdomen occupied the space and position of a child during gestation, and the patient tried to convince me during the whole of the examination that it was a child, and pointed out what she conceived to be its outlines, the head, buttocks and hands.

March 30, after dilating the os with a sponge tent, I explored the uterus, and became fully convinced that the enlargement was extra-uterine, and from all of the facts concluded that it was a tumor, either dermoid or fibroid, and that the only way to settle the doubt, and dispose of this growth, was by a laparotomy.

Having laid the matter fully before her and her husband I left it with them for their consideration. On the following day, I was informed that they had concluded to leave the matter to my judgment.

My patient was of fair complexion, blue eyes, and spare build

with long extremities, symmetrical in form and had a good family history.

The house was new and in a good sanitary condition.

April 5 I had the carpet removed from her room, with all superfluous furniture, and had the house thoroughly scrubbed with hot water and soap. At night April 6 I administered a dose of magnesiæ sulph., and on the following morning I had the abdomen and pubes shaved and thoroughly washed with a 1-4000 solution of bichloride of mercury,—the rectum and vagina thoroughly washed out with the same. And at 12 M. with Drs. B. C. Jones, L. D. Fuller, J. E. Graves and L. F. Quinn present and assisting, I proceeded to make the operation of laparotomy. The anesthetic used was composed of chloroform, ether and alcohol (1, 2, 3.) It was about one hour before the patient was fully under its influence, nausea and vomiting occurring several times during its administration. We had no spray, but the abdomen and all contiguous parts were thoroughly re-washed with the solution of bichloride. An incision was made from near the umbilicus to the pubes, in the median line, through the skin and subcutaneous tissues to the sheath of the recti muscles. Hemorrhage having ceased, I opened the peritoneum, cautiously dividing the recti muscles, holding up with a forceps and nipping the peritoneum, introducing a finger, and with a probe pointed bistoury opening the abdomen to the full extent of the external wound. I then introduced my hand into the abdominal cavity, and found some easily broken down adhesions and on the left side a pedicle of a triangular shape, that consisted of a double fold of peritoneum, that arose from the broad ligament of the uterus. Its lower edge, which ran from the uterus to the left side of the pelvis, was several inches long, and the Fallopian tube, which was also very much elongated, was stretched up to the top of the tumor. The tumor, having been turned out of the abdomen, I secured the pedicle with a double cat-gut ligature, (carbolyzed) several inches from the tumor, and another single ligature near the tumor. I divided the pedicle between the ligatures, and removed the tumor. I washed the abdominal cavity thoroughly, using a pitcher for my fountain, with a $1/4000$ solution of bichloride (tepid) — sponged out every thing in the cavity with prepared sponges using the *precaution for my assistants to touch nothing about the patient or the wound without first covering their hands with antiseptic gauze.* I closed the peritoneal

cavity with continuous sutures of carbolized catgut, and the external wound with interrupted sutures of braided silk about one inch apart, having placed a glass drainage tube in the lower portion of the wound. I then covered the whole abdomen with four folds of antiseptic gauze and absorbent cotton, and applied a bandage, also covering the vagina, perineum and anus with antiseptic gauze.

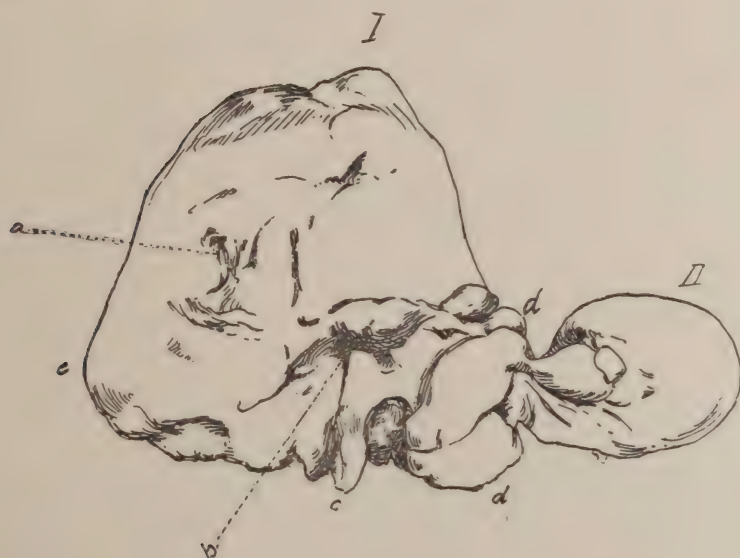
The main tumor was a fibro-cyst similar in shape to a beef's heart, with a distinct cystic tumor, filled with a dark liquid, attached to the main tumor by a pedicle several inches in length. This last tumor was oval in shape, about the size of a goose egg. The color and shape was very much like a kidney.

On the main tumor, and at different points, there were a number of smaller cysts of different sizes and shapes, which had the appearance of blisters from burns. These small cysts were filled with a transparent liquid. Near the base and at the side or longest diameter there were several lobes, or a kind of multilobular fibroid growth; also another small fibroid an inch and a quarter in diameter, irregular in shape, attached by a pedicle several inches in length, moved freely when disturbed, but ordinarily lay on the front of the main tumor over an indentation with a fissure. This little lobe was what the patient mistook for the hand of a child. The main tumor is about eight inches in its longest diameter, the base is seven inches and the whole mass weighed about five pounds. The operation lasted one hour and a half from the time the patient was placed upon the table, one hour being consumed in the administration of the anesthetic.

The patient sustained very little shock from the operation, and rallied very soon after its completion. Not more than two ounces of blood was lost in the whole operation.

At 6 P. M., six hours after the operation, the patient was very sick at the stomach and vomiting every few minutes. I ordered ice in small particles to be kept in her mouth, and gave $\frac{1}{8}$ grain morphine sulph. hypodermically. She slept at intervals through the night, but was disturbed frequently by paroxysms of vomiting. At 8 A. M. pulse was good, 82; no fever; some pains in the bowels. I ordered small bags of ice on the abdomen. At 6 P. M., very sick at the stomach, complained of the drainage tube. On examination I found the dressings very wet from the excretions that were forced through the wound between the sutures while vomiting. I removed

the drainage tube and applied fresh dressings to the abdomen; pulse had risen to 100, and cheeks were flushed. I gave morphine and alcohol hypodermically, the patient rested well during the night until 1 A. M., when the sickness returned. On the 9th at 8 A. M. I found the pulse back to 82, gave morphia and alcohol hypo-



dermically. Took some milk and ice through the day. From this time up to the fifth day after the operation she remained about the same, when the wounds were redressed, and the patient partook of food with a relish, and had a free evacuation from the bowels. From this time up to the 16th day from the operation her symptoms were about the same; the internal portion of the wound had healed. I took away the sutures in the external wound, and strengthened the walls of the abdomen by adhesive strips and a four-tailed bandage, when she left her bed for the first time and sat on an easy chair. Since that time she has had no trouble, except that her bowels become constipated.

April 30, I discharged the patient, feeling assured that she was able to get along without further aid from a physician.

Laparotomy in country practice is very rare, and a case so inter-

esting as this has been to me I feel assured will be appreciated by the members of this association.

Dr. Bartlett then presented the specimen from which the accompanying illustration is taken.

A photograph taken from the tumor. I shows the main tumor, fibroid except small cyst-like blisters as from a burn. *a*, a depression and fissure that was covered by a small irregular tumor, *b*, that was supported by a pedicle; *c*, pedicle of main tumor, *dd*, multilobular portion, *c* to *d* 7 inches, *d* to I 8 inches.

No. II, oval in shape, supported by a pedicle, cystic, filled with a dark liquid, similar in color to the kidney, about as big as a goose egg.

Whole mass weighed about five pounds.

CURES FOR OPIUM HABIT AND INEBRIETY.—Dr. Orpheus Everts says in his annual report of the Cincinnati Sanitarium:

It should be known and recognized by all men, but more especially by the immediate friends of inebriatee for whom they may be seeking remedies, that there is no substance, vegetable or mineral, simple or compound, known to science or to quackery, having the quality of a specific, where by the demand of an unstable or neurotic brain that has become habituated to the stimulation or narcosis of alcohol, opium, or other intoxicant, may be successfully and permanently silenced, or the habit of intoxication be permanently overcome. Most inebriety may be somewhat benefited by treatment under favorable conditions (the most essential being authority to restrain). Many may be restored to good general health, with firm resolutions to abstain from further use of drinks or drugs that intoxicate. Some may never return to their old but abandoned ways after restoration in hospitals. But neither the success nor the failure of such persons should be ascribed to the merit or demerit of any so-called "specific" or "cure" for inebriety, or the opium habit.

EDITORIAL.

SNAKE BITE AND ITS ANTIDOTE.

Dr. H. C. Yarrow, Curator Department of Reptiles, U. S. National Museum, has published a series of articles in *Forest and Stream*, which are of scientific value and of interest to physicians.

The results of experiments by Vincent Richards, Fayrer and others led him to doubt the reliability of Lacerda's views concerning the antidotal effect of the permanganate of potassa, and stimulated him to repeat the experiments himself, from which he was forced to the conclusion that the salt is of little or no value, at least, in poisoning from *crotalus* (rattle-snake) venom, used according to Lacerda's directions.

The method of procuring the venom for experiment he describes as follows, being the same as that adopted and recommended by Dr. S. Weir Mitchell in his experiments:

"The snake is seized a short distance behind the head by means of a staff having at its end a thong of leather passing over the end and through a staple, and this is tightened or loosened as occasion may require, by means of a string extending up the handle. It has been found necessary not to confine the snake's head too tightly, as otherwise it cannot be induced to strike. The head being secured, a stick having its end covered with absorbent cotton, is pressed against the snake's mouth, and it is teased until sufficiently irritated to strike its fangs into the cotton which receives the venom and obviates any danger to the fangs, as it has been found in allowing snakes to strike against a saucer the fangs are frequently broken off. Generally a snake will strike

three or four times very viciously, and then relapse into sullen apathy."

He has found it impracticable to procure venom from rattle snakes by pressure over the poison glands.

From a large rattler, weighing three or four pounds, at a first attempt about fifteen drops of venom were secured after the reptile had struck three times, but the repetition of the process led to a material diminution of the quantity obtained.

The cotton after having received its charge of venom was removed from the stick and carefully washed out in glycerine. The strength of the solution was so adjusted that it should consist of eight parts of chemically pure glycerine to one part of venom.

Regarding the popular belief that if snakes are kept from water, they are not poisonous, he found that by keeping the rattlers without water for a week or two the quantity of venom obtained was much smaller than when they were allowed free access to water. The rattlers could not be induced to eat when in confinement, but would take considerable quantities of water when allowed access to it.

As the result of his observation Dr. Yarrow is of the opinion that a rattler, if carefully and kindly handled, will not bite the hand that grasps it. Though many believe that if the fangs of a rattler are once removed, at least a year is required to renew them, Dr. Yarrow has a rattler in which the fangs have been twice renewed at intervals of only three weeks. He thinks these reptiles know when the contents of the poison gland is exhausted and also that it is useless to show fight when the fangs have been removed, as they refuse to bite under those circumstances.

In the experiments with permanganate of potassa, Dr. Yarrow found that a five per cent solution of the salt added to the glycerine and venom solution neutralizes its poisonous effects, and if a ligature is placed around the leg of an animal and a certain quantity of glycerine-venom is injected below the ligature, followed by

a solution of the permanganate, no poisonous effect is produced by the venom.

In cases where the ligature was not applied, even a five per cent solution of the permanganate salt was utterly inefficacious to antidote the crotalus venom even when injected immediately after the venom, the hypodermic needle being left *in situ*, the barrel of the syringe being detached and filled with permanganate solution, and readjusted to the needle in the tissues. Lacerda claimed that a one per cent solution of the salt would act efficiently even after the lapse of a considerable time.

Reviewing the literature of the subject, Dr. Yarrow finds the great majority of observers agreeing with his views rather than with those of Lacerda.

It is to be remarked that the observations of Lacerda had reference to the poison of the bothrops, which is apparently much less intense than that of the crotalus. It should be noted also that Mitchell states that, at least, seven-eighths of the patients bitten by the crotalus recover.

As regards the efficacy of injections of ammonia as an antidote to crotalus poisoning Dr. Yarrow's experiments confirm those of Fayrer and Weir Mitchell, showing that this treatment is dangerous in itself, and has little or no effect in preventing the action of the venom.

Several cases are cited of cure of snake bite by the use of the expressed juice and bruised leaves of different species of *Euphorbia*. He was able to make but one experiment, and that was with *Euphorbia maculata*. The result was negative. Dr. Yarrow will experiment with some of the other species of *Euphorbia* as opportunity shall offer.

Another line of investigation was with regard to the effect of jaborandi. The experiments with this drug were quite encouraging and will be continued. It seems to have decided antidotal action in the case of rabbits, though failing with birds. Two persons, one of them a physician in Washington, have offered them-

selves for the purpose of experimentation with this agent; but Dr. Yarrow will experiment further with animals before venturing to trust its power to antidote injections of venom in men.

Some experiments made with a "snake-stone", sent from North Carolina, and which was found to consist of an indurated and impure kaolin, were too few in number to be of very great value or, to prove anything more than that the stone really did adhere to the wound and become charged with blood. In two experiments the chicken recovered from a dose of crotalus venom which it was supposed would cause death in half an hour. A third experiment was unsuccessful.

Dr. Yarrow has not experimented with the antidote suggested some years ago by Bibron, and commended by Dr. William A. Hammond. The formula is as follows:

R _y	Potass. iodid.,	.	.	.	.	.	.	gr. iv.
	Hydrarg. chlor. cor.	.	.	.	.	.	.	gr. ij.
	Brominii,	.	.	.	.	.	.	f. ʒv. M.

Sig. Ten drops in a tablespoonful of wine or brandy, to be repeated if necessary. Put in glass-stoppered bottles.

Dr. Weir Mitchell experimented carefully with this preparation upon sixteen dogs. Of eight dogs bitten and treated with the antidote two died, while of eight others bitten and not so treated three died. Dr. Yarrow will repeat these experiments if sufficient venom can be obtained.

Dr. Yarrow mentions a number of other methods of treating snake bites, which have had more or less popularity, but as he has not tested them himself we will not occupy space with their enumeration here.

A number of experiments with solutions of extractum pancreatis would go to confirm the opinion of Lacerda and others that the injection of pancreatine into the tissues would produce the same effect as venom, though Dr. Y's experiments "indicate that pancreatine, if poisonous, must be much feebler in action than snake poison."

Experiments made by Dr. Yarrow seem to prove conclusively the truth of the statement of Fontana in 1776, "that the venom of a serpent is not a poison for itself or for other species, whether harmless or otherwise."

COLDS AND BRONCHITIS.

In the *Therapeutic Gazette*, April, 1888, Dr. H. C. Wood refers editorially to the treatment of colds and bronchitis, recalling in humorous tone experiences of his boyhood from domestic treatment with Epsom salts, antimonial wine, syrup of squills, etc.

The result of experience has shown him that when the cold is a wide-spread general one, involving the whole body in a condition which he considers a form of subacute rheumatism, with aching pain and general wretchedness, a free jaborandi sweat, followed by a few full doses of quinine, especially if aided by mercurial or other purgation, will often relieve the patient at once.

Coryza is generally relieved most readily and surely by the insufflation of bismuth and cocaine.

We have ourselves found the following formula suggested by Ferrier, of London, to be very satisfactory in the treatment of coryza:

R _y	Morphiæ hydrochloratis,	-	-	-	gr. ij.
	Pulv. gum acaciæ,	-	-	-	ʒij.
	Bismuthi subnitratiss,	-	-	-	ʒvj.

M. Sig. To be snuffed up the nostrils or insufflated with powder blower freely and often when the cold in the head first appears.

Dr. Wood records a personal experience in being promptly relieved from a violent cold in the head by the manipulations called a dry shampoo at the hands of a colored barber. A patient of our own told us a few days ago of having been relieved of a headache, which had been troubling him for several days, and which was due,

probably to an aggravation of a chronic catarrhal trouble, by similar manipulations of a barber.

When the cold affects the bronchial tubes, he uses the so called expectorants which he divides as of old into three groups: first, narcotic expectorants, to allay excessive cough and quiet nervous irritability; second, sedative expectorants, for the first stage of bronchitis, to facilitate secretion and expectoration; third, stimulating expectorants, useful in the later stages of bronchitis when expectoration is free.

He calls attention especially to the value of chloroform as a remedy for quieting cough, and suggests the following which may be readily prepared in any household, by mixing a dessertspoonful each of whiskey, paregoric and glycerine with thirty minims of chloroform. To be well shaken and taken in teaspoonful doses *pro re nata*.

In the first stages of bronchitis Dr. Wood has mainly discarded the depressant expectorants formerly so commonly ordered, and replaces them with the citrate of potassium, recommending the following formula, to the value of which after several years' use we can add our hearty endorsement:

R	Potass. citratis,	-	-	-	-	3j.
	Succi limonis,	-	-	-	-	3jss.
	Syr. ipecac,	-	-	-	-	3ss.
	Tr. opii camph.,	-	-	-	-	3iij.
	Syrupi q. s. ad	-	-	-	-	3iij.

M. Sig. Dessertspoonful every two hours.

Chloride of ammonium he regards as the most valuable of the older stimulating expectorants, in fact the only one which still retains his confidence except the syrup of garlic which is so disagreeable to most patients as to be very seldom used. It is valuable in acute bronchitis when free secretion has once been established, and sometimes seems to have the power of bringing about secretion, and when the citrate of potassium fails, as it rarely does, Dr.

Wood resorts to the chloride of ammonium and usually with good results.

The following formula gives the best disguise that he has found for it:

R _x	Ammonii chloridi,						
	Ext. glycyrrhizæ,	-	-	-	-	aa	℥iss.
	Glycerini,	-	-	-	-	f.	℥ss.
	Mucil. acaciæ,	-	-	-	-	f.	℥ij.
	Syrupi,						
	Aquæ, aa q. s. ad	-	-	-	-	f.	℥ij.

M. Sig. Dessertspoonful every two hours.

The only other stimulant expectorants of which Dr. Wood makes use are the oil of eucalyptus, terebene, oil of sandalwood and occasionally oil of cubebs or cupaiba, the first of which he considers the most efficient. It may be administered in an ordinary cold or bronchitis as soon as free secretion has been obtained. Terebene and oil of sandalwood are more stimulating, and should be used later, while oil of cubebs should be used still later. All these remedies are best administered in capsules, as the dose is small and the taste disagreeable.

SUMMER DIARRHEAS OF CHILDREN.

The profession owes much to Dr. V. C. Vaughan, for his researches with regard to milk ferments, and especially with reference to the poison generated in milk under the agency of a special ferment to which poison he has given the name tyrotoxinon.

Dr. Vaughan read a paper before the Pediatric Section of the New York Academy of Medicine, May 23, 1888, containing the results of some "Experimental Studies on Some Points connected with the Causation and Treatment of the Summer Diarrheas of Infancy."

He lays down a series of propositions which he then discusses briefly. He says:

"1. The factor which is most frequently operative in the causation of summer diarrheas of children under two years of age is to be found in the food." Though hot weather has long been regarded as a most potent factor in the causation of these diseases, Dr. Vaughan regards it as a mediate, not a direct and exciting cause. The high temperature is necessary that the germs of putrefaction may be widely disseminated and find their way into food and drink and the inhaled air, and also that that putrefactive products already formed may suffice to overcome the normal antiseptic and germicide properties of the digestive juices. Further, the summer heat depresses the 'nerve-centres, and so lessens and, perhaps, changes the normal secretions of the stomach and upper intestine.

"II. The changes whereby harmful substances are formed in the food either before or after it is taken into the body are fermentative in character, or, in other words, are due to micro-organisms."

Recognizing the much readier digestibility of woman's milk than cow's milk he believes that the chemical differences in composition are by no means the most potent cause of diarrheas in artificially fed infants; but finds this cause "in the fact that milk taken directly from the gland of a healthy animal, be it a woman or a cow, contains no germs of any kind whatever; while, on the other hand, cow's milk, as fed to children, always contains germs, and too frequently it contains those which interfere with the normal digestive processes, and lead to serious disease." He relates a number of experiments which demonstrate the truth of this proposition. He shows that while cholera infantum and other forms of diarrhea do occur in nursing infants, this can readily be explained by the unhealthy mother supplying diseased milk from her breasts, or by the introduction of germs to the digestive tract of the infant from some other source than the milk.

He shows that a few germs introduced into good milk will

speedily render the whole poisonous, and that milk that has been sterilized and kept in sterilized vessels does not undergo these changes even when the temperature is maintained at the point most favorable to putrefaction.

"III. The micro-organisms which produce the catarrhal or mucous diarrheas of infancy in summer may be, and probably are, only putrefactive in character, but those which cause the choleric form or serous diarrhea, true cholera infantum, are more than putrefactive; they are pathogenic, they produce a definite chemical poison, the absorption of which is followed by the symptoms of the disease." He believes that the poison of choleric form diarrhea acts immediately on the nervous system, probably chiefly on the sympathetic system, while the most prominent early effect of the poison of catarrhal diarrhea is as a local irritant.

"IV. The bacteria which produce these diseases prove harmful by splitting up complex molecules and forming chemical poisons." He shows further that the poison which causes the choleric form diarrhea of infancy is probably the tyrotoxin, above referred to, for the following reasons:

(a) This ptomaine results from the putrefaction or bacterial fermentation of milk." The disease, with but few easily explained exceptions, is confined to children fed on cow's milk, and prevails chiefly where milk is used most likely to be subjected to conditions which favor putrefactive decomposition.

"(b) Tyrotoxin has been found in milk given to a child immediately before the appearance of symptoms of choleric form diarrhea.

(c) The symptoms of the disease increase if the administration of milk is continued, and abate when milk is withdrawn from the food.

"(d) The symptoms induced by the poison and those observed in the disease are identical.

"(e) The post-mortem appearances are identical in the two cases."

"V. The most efficient preventive treatment of the summer diarrheas will consist in giving more attention to the food, methods of feeding, and to the sanitary surroundings of children during the first two years of their lives."

To some of the points which he brings out in discussing this proposition we call attention in another place (vid p. 121).

"VI. In the curative treatment of summer diarrheas of infancy, the destruction of the bacteria which are causing the abnormal fermentation is a necessity."

With regard to the means of accomplishing this object he remarks that one of the surest methods of destroying either animal or vegetable life is to withdraw all food, and that germs in the intestine may be destroyed in the same way. "If they feed upon the constituents of milk, stop the administration of milk." Even if the bacteria are not destroyed their power to generate poison may be taken away, as shown in the case of the typhoid bacillus by Brieger, who found that when cultivated in solutions of peptone this bacillus will grow and multiply but will produce no typhotoxine, but when cultivated in beef-tea preparations it does produce the poison. Dr. Vaughan has found that a small quantity of milk containing tyrotoxicon added to any quantity of good milk will soon render the whole poisonous; but when added to beef tea or solutions of egg-albumen, the amount of the chemical poison is not increased.

Accordingly he recommends as the first step in the treatment of summer diarrheas of infancy the withdrawal of all milk foods, to be followed by such other measures to hasten the destruction of the agents of the harmful fermentation as may be deemed best. For example, Epstein stops milk food, washes out the stomach, sometimes using an antiseptic for the purpose, gives solutions of albumen as food and germicides as medicine.

Dr. Vaughan found by experiment that one part of bichloride of mercury to 24,000 parts of milk ($\frac{1}{25}$ grain in 2 ounces) is sufficient to prevent the activity of the tyrotoxicon-producing germ. Sodium

salicylate in proportion of one part to about 200 (5gr to 2oz) were also efficient. He notes, however, two case of Ehrig's in which he used a 1.5 per cent solution of resorcin in washing out the stomach of a child suffering from cholera infantum, and serious symptoms including hematuria followed from leaving a little of the solution in the stomach.

ARTIFICIAL FEEDING OF INFANTS.

One of the subjects which is always of vital interest to the physician is that of the best mode of feeding an infant that for any reason is deprived of its natural nutriment, its mother's breast milk; but this subject comes with special urgency to the thought of the physician in the hot months of summer when the prolonged heat prostrates the nervous system, diminishes the digestive power and predisposes to different forms of gastro-intestinal disturbance.

Dr. T. M. Rotch read before the Obstetrical Society of Boston, May 22, a paper on this subject which contains a valuable résumé of the present status of our knowledge on this subject.

He remarks first the fact that the milk received from the healthy mother's breast is absolutely free from germs, and in order to approach this condition artificially we must sterilize the food supply of the infant and the vessel containing it. No artificial receptacle can compare with the mother's breast, which "provides a fresh supply of food at proper intervals, absolutely prevents fermentation of the food before it enters the infant's mouth, forms the mouth by the process of sucking, incites to action the necessary digestive fluids, avoids a vacuum by collapsing as it is gradually emptied, thus allowing the food to flow continuously, and finally, is practically self-regulating as to the amount of daily food according to the infant's age."

The best we can do in the way of a receptacle is to adopt one of

absolute simplicity which, by perfect cleanliness, may be prevented from becoming a source of fermentation. Dr. Rotch suggests a tube similar to a large test tube with a foot, which, having no angles, is readily cleansed. He has tubes of different size to correspond to the varying capacity of the infant's stomach at varying age. A small hole near the mouth admits air, and thereby prevents a vacuum being formed, and regulates the rapidity of the flow of milk. The edge of the rubber nipple which is drawn over the mouth of the tube covers this hole, or is rolled back by the finger of the nurse according to the demand shown by the infant when feeding.

For sterilizing the food Dr. Rotch suggests a simple apparatus which can be readily made by any tinner at small expense. It is a tin pail, eight inches in diameter and fourteen inches deep, raised on three legs sufficiently high to allow an alcohol lamp to stand under it; four inches from the bottom of the pail on the inside is a perforated tin diaphragm on which the feeding tubes stand while being sterilized. The pail has a cover and handle. Water is placed in the bottom of the pail, and when heated by the lamp the tubes are soon enveloped in steam. The feeding tube is filled with milk, the nipple adjusted as on any nursing bottle and then a strong rubber cot is drawn tightly over the nipple and well down onto the tube, thus completely excluding the air. The tube is then exposed to the action of steam confined in the vessel described, or any other, for twenty minutes, which Dr. Rotch has found sufficient to render it sterile, in so far that it destroys the developed bacteria, without apparently altering the chemical attributes of the food as is done by boiling. In order to prepare the food so that it shall remain sterile for some time, it is necessary to sterilize for several days in succession, as the first sterilization does not affect the spores which develop later.

An experiment made by Dr. Ernest is related in which a mixture of cream, milk, lime-water and milk sugar was sterilized for twenty minutes as above described, and then placed in an incubator and

kept at the temperature of the human body for twenty-four hours, at the end of which time no change could be detected in the mixture, either in color, odor or taste, all of which appeared to exactly correspond to a freshly prepared mixture of the same kind.

Wherever the factor of fermentation appears to be prominent in disturbing the infant's digestion, the author insists upon the importance of sterilizing the food.

An important factor in the problem of infant feeding is the determination and supply of the proper amount of nourishment, avoiding on the one hand the over-distention of the stomach and burdening it with more food than it can care for, and on the other hand the failure to furnish a sufficiency of all the ingredients necessary for the proper development and maintenance of the organs and their functions.

"Frolowsky's investigations show that the activity of growth in the stomach's capacity can be represented by the ratio of one for the first week to two and one-half for the fourth week, and three and one-fifth for the eighth week, while it is only three and one-third for the twelfth week, three and four-sevenths for the sixteenth, and three and three-fifths for the twentieth," thus increasing rapidly in the first two months and only slightly during the succeeding three months.

Ssnitkin found that the greater the weight the greater is the gastric capacity, and that one one-hundredth of the initial weight should be taken as the starting figure which should be increased by one gramme for each day of life during the first month.

The greater metabolic activity in the younger infant explains the greater need for frequent feeding in the younger as compared with the older infant.

The following table contains computations from the results of Russian, German and American observers and, Dr. Rotch suggests may be a guide in the management of cases of difficult digestion, as of course some infants will have a greater appetite and greater power of digestion than others of the same age and weight.

TABLE.

The average initial weight of infants is 3000-4000 grammes=about 6.8 pounds.

The average normal gain per day in the first 5 months is 20.30 grammes=about 1 ounce.

GENERAL RULES FOR FEEDING.

Age.	Intervals of Feeding	Number of Feedings in 24 hours.	Average Amount of each Feeding.	Average Amount in 24 hours.
1st week	2 hours	10	1 ounce.	10 ounces.
1-6 weeks	2½ hours.	8	1½ to 2 ounces.	12 to 16 ounces.
6-12 weeks, and possibly to 5th or 6th month	3 hours.	6	3 to 4 ounces.	18 to 24 ounces.
At 6 months	3 hours.	6	6 ounces.	36 ounces.
At 10 months	3 hours.	5	8 ounces.	40 ounces.

The weight, as well as the age, is necessary to determine the amount for each feeding: in the individual infant, the rule being 1-100 of the initial weight + 1 gramme for each day during the first month.

Illustrations of above rule to serve as guides for especially difficult cases.

Initial Weight.	Each Feeding.		
	Early Days.	At 15 Days.	At 30 Days.
3000 grammes.	30 grammes (about 1 ounce).	30+15=45 grammes (about 1½ ounce).	30+30=60 grammes (about 2 ounces).
4500 grammes.	45 grammes (about 1½ ounce).	45+15=60 grammes (about 2 ounces).	45+30=75 grammes (about 2½ ounces).
6000 grammes.	60 grammes (about 2 ounces).	60+15=75 grammes (about 2½ ounces).	60+30=90 grammes (about 3 ounces).

After a careful examination of the various substitutes for the mother's milk and comparison of the analysis of these with the analysis of mother's milk Dr. Rotch reaches the conclusion that a factor which is largely effective in causing the easy digestion of those infant food which have been highly successful is the fact

that the casein in the milk is reduced to about one per cent, as found in human milk, and that an important element in their failure is the deficiency of the fat element of food; as also of the sugar in most of them.

One statement which we saw with surprise was that with regard to the use of condensed milk, which is of so much importance that we give the author's own words:

"The process of manufacture of condensed milk sterilizes it to a certain degree, and we thus have a very important factor in its favor which does not exist in cow's milk: it is also superior to cow's milk in that when mixed with water it is, although not alkaline, still not acid, and its large percentage of cane sugar helps to avoid the occurrence of fermentation, which so readily occurs in cow's milk. In Table III. [not given here] the percentage of the ingredients of condensed milk—when diluted, as it commonly is, ten times—is given, and we at once see why it is easily digested but non-nutritious, for two of its ingredients, notably the fat, are found to have fallen below the standard as represented in the upper line of the table, [human milk] the ash and casein only attaining the proper percentage. The nearest approach to the standard is obtained by diluting it with six parts of water, which, as shown in the table, results in giving the proper percentage of the albuminoids, sugar, and ash, but the fat is still more reduced, and, unless supplied in some way, we should suppose that the nutrition would suffer, and this supposition appears to be supported by clinical results. That is, clinically condensed milk represents a food easily digested but not sufficiently nutritious, the former explained by its low percentage of albuminoid and ash, its neutral reaction, its anti-ferment properties, and its proper per cent of sugar, the latter by its great lack of fat. Among the poorer classes and in infant asylums it is a favorite food for the physician to prescribe because the infants digest it so easily, but the testimony of those clinical observers who look beyond the temporary digestion to the subsequent nutrition of the child supports the view that condensed

milk, * * * must be modified by more than the addition of water before it can safely be given as a continuous food to the average infant.

For preparing the way for other more nutritious food in cases of difficult digestion, for convenience in traveling, and when for any reason the intelligence or the proper desire to take trouble about the food is lacking in the parents, condensed milk from its simplicity in preparation as well as from its other attributes mentioned above, is a valuable addition to other more rational methods of artificial feeding. *The commonly accepted opinion that condensed milk contains too much sugar is an error*, [We italicise this, because we have hitherto accepted the common opinion not having taken the pains to verify or disprove it, and the correction is very important in this connection] for by referring to the table it will be seen that, as usually given, the sugar in the mixture is below the proper percentage, but if it is diluted six times, as recommended above, we then have merely the fat to deal with, and the reaction which should be made alkaline.

Dr. Rotch deprecates the addition to an infant's food of any material not a normal ingredient and after carefully examining all the foods suggested, strongly favor the mixture suggested a few years ago by Dr. Arthur V. Meigs, of Philadelphia, which is constituted as follows: Two parts of cream (14 to 16 per cent. fat) one part average milk, two parts lime water and three parts sugar water ($1\frac{3}{4}$ drams milk sugar to the pint of water).

To avoid the necessity of having the cream analyzed he suggests using cream obtained by the centrifugal process, which varies but little from 32 per cent, so that by diluting with an equal quantity of water we have a cream with about sixteen per cent of fat.

Analysis of this mixture so exactly corresponds with those of woman's milk that it would seem that, when sterilized by the method of Dr. Rotch or by any efficient means, much better results should be obtained than have been hitherto by any other method of infant feeding.

In connection with the views of Dr. Rotch given above we desire to call the attention of our readers to the opinions of some of the leading authorities regarding this subject as brought out in the report of the Subcommittee on Infant Feeding at the meeting of the A. M. A. at Cincinnati last spring.

Cases arise in the experience of every physician in which it is impracticable to secure a satisfactory supply of pure cow's milk and cream by which to prepare fresh food in such a way as Dr. Rotch recommends. In such cases it is well to bear in mind the principles which should guide in the selection of an artificial preparation.

In the report just referred to Dr. Eustace Smith, whose work on "The Wasting Diseases of Children" is a classic in pediatric literature is quoted as follows:

"Dessicated, partly peptonized milk in the form of a milk food containing partly converted starch (soluble starch, dextrine and a small quantity of lactose) in a convenient, and when well made, very efficient substitute for the mother's milk."

Dr. W. B. Atkinson, another specialist in this department refers to the milk supply of large cities as one of the great problems of the day, as regards its purity. He cites the recommendation by Prof. Vaughan of the use of dried milk solids because they can be transported without injury from any distance, and if properly prepared may be kept without putrefaction occurring." Now, if such pure milk from perfectly healthy cows were partially predigested by the process of peptonization with fresh pancreatine, the temperature sufficiently raised to destroy the ferment, then reduced to a powder by evaporation, and to this dextrin added, thus supplying carbohydrate, we would then come as near the production of a perfect food for infants as might be possible in the absence of breast-milk."

A preparation recently presented to the profession by one of the most reliable firms in the country seems to meet theoretically and practically the indications set forth above.

REPORTS ON PROGRESS.

MEDICINE.

When shall Digitalis not be Given?—HUGHARD describes cardiac paralysis produced by this drug as *digitalis asystole*, and affirms that by the improper use of this remedy it may be grafted upon valvular asystole. This accident may occur:

1. When the cardiac muscle is extensively degenerated; digitalis, by its failure to secure response of the heart muscle, is a valuable means of diagnosing this condition.

2. There are two stages of the modification which the viscera undergo in heart diseases; one is the stage of venous engorgement, without marked parenchymatous changes; the other is the stage of sclerosis. In the first of these conditions digitalis is of great value; in the second it is most harmful. When digitalis is contraindicated H. employs caffeine in doses of from 15 to 25 grains daily.—*Med. News*, Jan. 7, 1888.

Salol in Diarrhea.—DR. EICHBERG reports his results in the use of salol, as follows: During the summer he employed the drug in a number of cases in which diarrhea was, at one time or another, a prominent symptom. The report embraces 14 cases, of which 2 cases were of dysentery, 4 of diarrhea, 1 of loose bowels accompanying chronic gastritis, 4 of phthisis with diarrhea, 1 of enteritis, 1 of tertiary syphilis, 1 of diarrhea with subacute Bright's disease. An examination of the results brings out clearly the fact that salol, while of some service in diarrhea arising from almost any cause, cannot be relied upon with the same firm faith with which opium is administered. It seems to act promptly enough, especially in the simple forms of bowel trouble; but the antiseptic effect seems to pass off with some rapidity, so that it often becomes necessary later on to resort to other remedies. The weight of this experience, therefore, is rather against than for its use. At the outset it was always administered alone, without

other medicines, so that its effect might be thoroughly tested. It may be that the quantities given were too small, the average dose being 10 grains repeated every 4 hours (lately this medicine has been administered in maximal doses of from 40 to 60 grains at one time), and the result might have been different but for this factor; further experience alone can answer this point. As compared with naphthalin, the advantage rests entirely with the latter drug, which on account of its comparative insolubility and slow absorption, continues to act along the entire intestinal tract, while salol being decomposed high up in the intestine and absorbed at once, probably does not reach the lower part of the canal in sufficient quantity to be of my service.—*Med. News*, March, 1888.

Treatment of Erysipelas by Nitrate of Silver Compared with that by Water Dressing.—The results of very careful observations by PROF. POLOTEBNOFF, of Russia, may be condensed as follows:

1. Nitrate of silver cannot be classified amongst those remedies, to which a power of 'fixing' the erysipelatous process is attributed. True, there are now and then met sporadic instances where the process ceases to spread after the paintings under consideration; but a similar occurrence may be as often (or rather as seldom) noted, also under an entirely symptomatic treatment.

2. The nitrate does not possess any marked antipyretic action, the course of the fever remaining pretty much the same under either of the methods.

3. The nitrate does not prevent the development of the renal lesions.

4. Under the abortive treatment albuminuria lasts pretty nearly as long as in the expectative cases.

5. As to the cerebral and pulmonary complications, they occurred by far less frequently under the silver treatment than under the expectant one. But it remains as yet an open question, to which cause this difference may be ascribed—to a difference in treatment, or to some quite accidental circumstances.

6. Mortality remains the same under either of the methods.

7. Nevertheless, nitrate of silver undoubtedly shortens, to a certain degree, the duration of the disease. Its beneficial action may be explained by the admission that the painting promotes a more rapid regressive evolution of local inflammation, for when, in a patient with both-sided fœcial erysipelas one side

of the face is painted with the silver solution, while the other is covered with a simple water dressing, redness, pain, tenderness, and swelling disappear on the former side earlier than on the latter.

8. The said shortening, however, is but very trifling. In other words, the result does not in any way compensate for the troublesomeness of the painting procedure in a technical respect.

Thymus Vulgaris in the Treatment of Whooping-Cough.—DR. J. B. JOHNSON, of Washington, highly recommends the common thyme administered in the form of a decoction, which is made by putting one ounce of thyme into a pint and a half of hot water, boiling down to a pint, straining and sweetening well with honey or sugar. One to two teaspoonfuls every hour or two is the dose for infants, a tablespoonful for children. It reduces the paroxysmal character of the cough, and renders the disease milder in its force, and of shorter duration. It diminishes, in a peculiar manner, that inflammatory condition of the mucous membrane of the glottis and the air tubes, which invites reflex spasm, and thereby lessens the danger and liability to complications and renders the disease comparatively harmless. In cases where there is evidence of much inflammatory action of the bronchial tubes or lungs, two drams each of potassium iodide and chlorate of potash are added to the above decoction.—*Med. and Surg. Rep.*, March 16, 1888.

Syrup of Tar in Winter Cough.—DR. WM. MURRELL calls attention to the great value of this remedy in chronic bronchitis and winter cough. Syrup of tar as usually made is not much stronger than the old-fashioned tar water, but it can be prepared of almost any desired strength by the addition of a few drops of ammonia or any other alkali. Given in doses of two to four drams every three hours or oftener, it makes an excellent stimulating expectorant. Syrup of wild cherry, which is not without influence in allaying cough, may be combined with it to advantage. The efficacy of the mixture may be greatly increased by the addition of apomorphine in doses of $\frac{1}{8}$ to $\frac{1}{16}$ grain. The cough is relieved, expectoration is rendered easier, and the patient generally sleeps well the first night. Syrup of tar alone is admirable for the coughs and colds of children, and has none of the disadvantages of preparations containing opiates.—*Brit. Med. Journal*, March 3, 1888.

Value of Acetanilid (Antipyrine) in Enteric Fever.—DR. J. H. WAY, of North Carolina, states his experience with this drug in 13 cases of enteric fever. He used never more than six grains daily, which were given in two or three portions beginning at 1 P. M.: this in addition to quinine (twelve grains daily) and with sponging three to six times daily. All made good recoveries, and the average duration of the fever was 22 days. In none were the slightest evil effects observed to follow from its use, save in one instance where there was a slight degree of chilliness closely following the administration of the drug, and this did not occur again after the dose was decreased from two to one grain. The average reduction of temperature was 2.4° F. With reference to the effects of acetanilid on the heart, evidences of weakness or debility attributed to its use were at no time observed; on the contrary, there was less need of alcoholics than in cases treated without it. Muscular prostration and exhaustion was less marked. Non-delirious patients always looked forward with interest to the hour for taking the antifebrine, affirming that it made them feel much more comfortable, while muttering deliriums was invariably quieted, the patient often sinking gradually into a peaceful sleep. In the opinion of the author, antifebrin is a most valuable agent in the treatment of typhoid fever, but like other valuable agents, its use is likely to be abused. The reports of cases of cardiac failure and collapse, generally speaking, resulted from the administration of the toxic and not the medicinal dose of the drug.—*Med. News*, Jan. 7, 1888.

Antipyrin as a Uterine Sedative.—In proof of the good effects of this drug in uterine pains after parturition or in dysmenorrhea, to which he has already called attention, M. H. Chouppe related the following case: A woman, aged 35 years, was suffering from a large myoma situated in the posterior wall of the uterus, accompanied by copious hemorrhage which happened after menstruation. Ergot checked the hemorrhage, but caused such severe uterine pains that it had to be discontinued. Large doses of morphia were given, these caused the pains to disappear, but at the same time caused a relaxation of the uterus and reappearance of hemorrhage. Ergot was again given with similar results, the pains lasting two to three hours. Antipyrin was then resorted to; an injection, containing 30 grains of the drug was administered with the effect of dissipating the pains in 20 minutes. The following experiment was

finally tried: An injection of antipyrin was given half an hour before the dose of ergot. The patient experienced no pain, although there was active uterine contraction and arrest of hemorrhage. The conclusion is drawn that antipyrin relieves the pain caused by uterine contraction which is produced by ergot without diminishing the contraction. The author believes that it acts upon the spinal cord, and might be administered with advantage during parturition to women of an irritable temperament.—*Med. News*, Jan. 14, 1888.

Antipyrin in Sea-Sickness.—DUPUY has given antipyrin to prevent sea-sickness with the following results: The dose most generally useful was 23 grains, the effect of which was manifest in about ten minutes. More than 45 grains was never found necessary to procure relief in about an hour. In rare cases, where the drug was vomited, a hypodermic injection of 15 grains was efficient.—*Med. News*, Jan. 14, 1888.

Antifebrin in Acute Alcoholism.—DR. J. B. KELL, of Ohio, reports the case of man, aged 27 years, of a neurotic temperament, who after a protracted spree was taken with violent delirious insomnia, and other symptoms of acute alcoholism. Quinine was given to reduce temperature (101.5°) which it did quickly. Potassium bromide and chloral, each 15 grains every four hours, and later three grain doses of opium every two hours were administered without any effect on delirium and insomnia. Finally, in the evening of the second day, when his general condition became alarming, antifebrin in ten grain doses was tried. After the second dose, the patient fell into a disturbed sleep, which was made profound after another dose, and continued for five hours, during which the pulse was reduced from 140 to 112 and lost its dichrotic character, and the temperature fell from 103° to 99.5° . Upon waking a fourth dose was given which prolonged the rest four hours. The use of this remedy was continued along with supporting measures through the convalescence which was prompt and satisfactory.—*Med. Rec.* Feb. 18, 1888.

Antipyrin in Diabetes.—GOENNER reports the case of a man, aged 60 years, who had suffered from diabetes for six years, in whose urine as high as six per cent of sugar had been found. After antifebrin to the extent of 135 grains had been given, Trommer's

test failed to discover sugar. The drug was then continued for ten days, 45 grains daily, and a permanent improvement followed in ten days time.—*Med. News*, Jan. 7, 1888.

Antifebrin in Severe Variola.—HAAS, of Prague, has studied the effect of antifebrin in severe cases of confluent variola, and found that in comparatively small doses it lowered temperature, relieved the nervous disturbances of the disease, and prevented in some degree the extensive injuries to the tissue occurring in the worst cases.—*Med. News*, Jan. 7, 1888.

Antipyrin in Nocturnal Emissions.—DR. THOR, of Bucharest, gives some particulars as to the effect of antipyrine in cases of nocturnal emissions. Among all the remedies hitherto employed, bromide of potassium or bromide of sodium was the most useful, given in dose of 30 to 75 grains in a glass of water just before bedtime. The prolonged use of the bromides, however, as is well known, produced an acne-like eruption, and its use had for this reason often to be discontinued. Dr. Thör states that he has found antipyrin an excellent substitute for the bromides. He gives it in doses of $7\frac{1}{2}$ to 15 grains to be taken a short time before going to bed. In 7 cases it had proved successful, and checked the pollutions. No disagreeable after effects were observed. In "neurasthenia sexualis" of Beard it could also be used with good results; but the dose had in these cases to be sometimes increased from 15 to 30 grains a day.—*Brit. Med. Jour.* Feb. 18, 1888.

Peroxide of Hydrogen in Diphtheria.—DR. HATFIELD, of Chicago, reports his experience as follows: During the past few weeks 18 cases of diphtheria, of varying intensity from very grave to light, have been treated with peroxide of hydrogen, and have given 18 gratifying recoveries. The number of cases is yet too small to draw general conclusions, but they have proved to the writer that in this drug we have an agent that is exceedingly valuable as a local disinfectant when efficiently applied, either by means of a swab or in the form of a spray, (2 ounces diluted with 7 times its bulk of water.) Diphtheritic throats treated thus every 2 hours did not become, even in the worst of the 18 cases, putrid and offensive, as they invariably do if left to their own devices. Hydrogen peroxide does not act as a solvent upon the diphtheritic membrane, but rather as its disinfectant and antidote, nor does it

prevent the formation of, but neutralizes the poison of the diphtheritic exudate, and thus anticipates many of the sequelæ of this dread disease. The remedy is certainly worthy of more extensive trial in malignant diphtheria.—*Med. News*, Nov, 1888.

Carbolic Acid in Diphtheria.—DR. A. J. SEMENOFF, of Petrovsk, details ten successive cases of diphtheria in children, aged from one and a half to ten years, of which the first five were treated by perchloride of iron, chlorate of potash, quinine, benzoate of soda, tincture of iodine, turpentine, and tracheotomy, and all ended fatally, while in the remaining five (of which two were very severe) the treatment included painting the fauces with either concentrated carbolic acid (1 case) or a 10 per cent glycerine solution of the acid, and every one and all rapidly recovered.

In two patients of the latter group the nasal cavity was also affected, and was similarly painted with carbolic glycerine—in one case with a 10 per cent solution from the beginning, but in another at first with a 2.5 and 5 per cent one. In all these cases gargling with boracic acid and quinine internally were simultaneously employed.

The carbolic treatment was resorted to in three cases on the second day of the disease, in a fourth on the third, and in a fifth on the eighth.

The painting with a concentrated acid was repeated once or twice daily, while that with carbolic glycerine was applied every four, three, or two hours.

In one of the cases the morbid process was arrested, and the temperature fell to the normal level, after one day's treatment; in two cases after two days and in the remaining two after four day's painting. All the patients were well and sound by the end of a week from the beginning of the treatment.

With equally successful results Dr. Semenoff used a 10 per cent carbolic glycerine in other three cases of faucial diphtheria, in a lad of 16 years, and in the case of an elderly couple. In none of the patients were any toxic phenomena ever observed; even the urine remained of an ordinary dark yellow color as seen in febrile patients generally. The author thinks that so beneficial effects of the carbolic treatment decidedly speak in favor of Oertel's theory of the disease, according to which the latter in the beginning represents a purely local process, a diphtheritis, and becomes a constitutional one, a diphtheria only in the course of time. Carbolic

acid, Dr. Semenoff says, destroys the focus of the infection and arrests any further proliferation and dissemination of the pathogenic microbe. * * * Only Oertel's theory may explain this striking fact, that the disease can be practically cured in twenty-four hour, so that the patient by the end of this short time becomes quite another being, almost unrecognizable.—*Lon. Med. Rec.*, Jan. 1888.

Carbolic Acid in Diphtheria.—DR. K. S. BAKHUTOFF, of Tiflis, in a recent epidemic of diphtheria gave an extensive trial to the carbolic treatment of the disease. Of his 400 cases, in upwards of 200 he employed paintings, with from 11 to 27 per cent carbolic glycerine applied every two or three hours. He came to the conclusion that a local treatment of faucial diphtheria with strong solution of carbolic acid, fully deserves preference to any other local means.

This is so because the acid possesses (a) powerful disinfectant properties which are of paramount importance in septic and sloughing processes; (b) strong caustic ones which are extremely advantageous in the presence of tendency to bleed during the period of the separation of pseudo-membranes; and (c) anodyne properties which enable the patient, at least within an hour after a painting, to swallow with fair comfort, not only medicine, but wine and food.

This effect of the remedy is more valuable since the good feeding of a diphtheritic patient represents an essential condition for successful treatment. Dr. Bakhiutoff, however, does not regard the acid as a specific for diphtheria, in fact, he does not admit the existence of any specific anti-diphtheritic means whatever.

He eulogizes phenol only as a comparatively best symptomatic remedy. Starting from Buhl's theory that the lesion of the fauces and respiratory tract is nothing else than a secondary phenomenon, a local manifestation of a primary constitutional infection, Dr. Bakhiutoff invariably administers in all cases of diphtheria from the very beginning, quinine and salicylate of soda, as well as a nourishing and strengthening diet together with stimulants.—*Lon. Med. Rec.*, Jan. 1888.

A Method of Prophylaxis in Diphtheria.—By DR. A. CAILLÉ, of New York. It is a subject of general remark that in certain fam-

ilies one or more of the members regularly take sick with diphtheria in the spring or autumn of the year, this is especially true for children, and October, November, March and April are the months in which such patients are liable to contract the disease. It occurred to the author that this peculiarity might be due to the harboring of the diphtheritic germs in the nasal and oral cavities without damage to the organism until suitable soil for their growth was established by an active hyperemia of a neighboring mucous membrane from any cause whatever. On the strength of this view he subjected eight individuals who were subject to recurrent diphtheria to the following regulations:

I. All carious teeth to be filled or extracted, and the teeth to be examined by a dentist from time to time.

II. The mouth to be thoroughly rinsed thrice daily, after each meal, with one of the following solutions: (a) 3 per cent solution of potass. chlorate in water; or (b) liquor sodæ chlorinatæ, 1 to 20; (c) a saturated (4 per cent) solution of boric acid in water; the liquids to be alternately used and changed every four weeks. They were to be used as a gargle, as a mouth-wash, and dropped into the nostrils by means of a medicine dropper three times daily.

III. In the case of the children not able to gargle, the liquid was to be dropped into each nostril from a medicine dropper three times a day.

IV. These precautionary measures to be strictly carried out from Oct. 1, 1885, for one year, or eventually two years, except during the hot months, in which diphtheria had never been observed in these patients, and when most of the parties under observation were out of town. The result was that during the two following years not one of the persons experimented upon suffered from diphtheria. Five had severe attacks of acute pharyngitis and tonsillitis during this time, characterized by a dusky redness of the throat with moderate swelling of the tonsils, and a moderate pyrexia. Three of these were members of one family in which another adult member suffered from diphtheria in Feb. 1887. One of the infants belonged to a household in which there occurred two undoubted cases of diphtheria, but did not take sick.—*Med. Rec.*, Feb. 18, 1888.

Mercurial Fumigations in Laryngeal Diphtheria or Diphtheritic Croup.—DR. J. CORBIN, of Brooklyn, published his first paper on

this subject in 1881. He now records 30 cases treated in this manner with a mortality of only 16 per cent, (including two deaths from albuminuria two weeks after apparent recovery and one from blood poisoning)—an excellent showing when the seriousness of the complication of diphtheria, for which it is recommended, is considered. A tent is constructed over the crib, in which the child lies; and from 40 to 60 grains of calomel are volatilized by means of an alcohol lamp, the volatilization should be completed in one minute. The child is kept under the canopy 20 minutes; the process is repeated every two or three hours during the first day, after which the interval can generally be lengthened. During the time of fumigation the patient receives no medicine whatever; but at the beginning and end of each fumigation wine punch or wine is given. The fumes are not offensive and, as a rule, the child makes no resistance after the first fumigation. The patient generally falls into a refreshing sleep, and sometimes he will point to the lamp, indicating that a fumigation is desired. As much as 1000 grains of calomel have been used in the 24 hours, without the production of any unpleasant effects; indeed, the constitutional infection of diphtheria seems to beget a tolerance of the drug, wholly displaced by health. This is not recommended as a substitute for tracheotomy or intubation, but to be adopted as soon as there is evidence of the invasion of the larynx, and succeeded by a surgical operation if it be found necessary. According to the author, the volatilized calomel acts by being taken into the circulation, through the medium of the lungs, and destroying the vital force upon which the formation of the membrane depends, and thus bringing about sloughing of the same. In no other way than by fumigation can the drug be introduced in sufficient quantities to control the disease.—*N. Y. Med. Journal*, March 10, 1888.

The Value of So-called Diabetic Foods.—DR. C. HARRINGTON, of Boston, presents the results of his quantitative analysis of all the varieties of diabetic food that he could obtain, all of which claim to be substantially free from starch.

1. Gluten Flour (Farwell & Rhines, Watertown, N. Y.) contains 67.17% of starch, which will produce 74.63% of sugar. The bread of this flour would contain over 30% of starch, or the equivalent of 35% of sugar.

2. Special Diabetic Foods (same firm) contains 68.18% of

starch (=75.76% of sugar. Its bread would contain about 36% of starch (=40% of sugar.)

3. Health Flour contains 72% starch (=80% sugar). Its bread would contain about 40% starch (=over 44% of sugar.)

4. Gluten Flour (New York Health Food Co.) contains 66.18% of starch (=73.53% sugar.) Its bread contains about 35% starch (=38.5% sugar.)

5. Gluten wafers, plain, (same company) contains 66.96% of starch (=74.4% sugar.)

6. Gluten wafers, butter, (same company) contains 51.14% starch (=56.82% sugar.)

7. Dr. Johnson's Educators contain 71.43% starch (=79.37% sugar.)

8. Boston Health Food Company's Diabetic Flour No. 1, contains 62.94% starch (=69.93% sugar.) Its bread would contain 30% starch (=33.33% sugar.)

9. Diabetic Flour, No. 2, (same company) contains 54.88% starch (=60.98% sugar.) Its bread would contain about 23% starch (=25.55% sugar.)

10. Flour of bran has only a trace of starch. It seems to be a finely ground washed bran, and may be said to be almost as nutritious and palatable as exhausted sawdust.

11. Carlsbad wafers are made in three thin layers, the middle one consisting wholly of white sugar.

For purposes of comparison, the following are the results of the analysis of 3 bread foods of acknowledged richness in starch.

Graham wafers, 58.45% (=64.94% sugar.)

Home-made bread, starch, 44.99% (=49.55% sugar.)

Corn-cake (white meal), 38.04% starch (=42.37% sugar.)

—*Bost. Med. and Surg. Journ.*, March 22, 1888, p. 286.

Bicarbonate of Soda in Membranous Croup.—DR. C. L. HOGEBOM, of Long Island, reports the use, with good results, of large doses of bicarbonate of soda in this affection. As much as 80 grains are given to a child of 3 years, dissolved in a little water, to which a tablespoonful of milk is added to disguise somewhat the taste and ensure deglutition. This is followed by 30 grains every hour, until the laryngeal symptoms abate.—*Med. Rec.*, March 3, 1888.

SURGERY.

BY L. T. RIESMEYER, M. D., ST. LOUIS.

Fracture of the Sternum, with Dislocation of Fragments; Restoration to Place by Treatment by Position; Recovery.—CHAS. B. PORTER, M. D., presents the following case:

Fracture of the sternum alone is an extremely rare accident, but as a complication in crushing injuries of the thorax it is associated with fracture of the spine or ribs. At St. George's Hospital in four years nine cases were examined, three associated with fracture of the spine, and six with fractured ribs. Malgaigne recorded but ten cases, five of which ended fatally on account of complications mentioned above. The causes are usually direct violence, as crushing blows upon the chest, though violent bending of the spine backwards has produced it. One case (Chevaucé's) was caused by violent forward flexing of the body from a fall.

Dr. Fagel, of Mexico, reports this accident as having happened to a celebrated vaulter, who whilst bending his body backward, was endeavoring to raise a heavy weight with his teeth. The complications are injury and inflammation of the pericardium, pleura, lungs, mediastinum and heart.

Authorities differ as to treatment advised. Some recommend the recumbent position, with a pad between the scapulæ, and head low; others the sitting posture, with the head thrown back, others operative measures, as the lifting of the depressed fragment by means of the trephine and elevator, or the corkscrew; while another says that these latter methods are the relics of the old cruel and barbarous surgery." After position and manipulation have failed, and deep inflammation threatens, some operative interference is indicated, especially if the displaced fragment is pressing upon the trachea, or the large vessels.

The case which the author reports is that of Captain Holden, aged twenty-one, captain of the Harvard foot-ball eleven. (The author gives the name as, at the time of the accident, it became generally known through the papers.) Captain Holden stood erect ready to tackle one of the opposing team, who was running with the ball. As his opponent reached him he jumped, and his knee struck Holden on the sternum, producing a fracture and dislocation of the upper fragment backwards, the lower one overriding. The

point of the fracture was at the junction of the second and third pieces of the gladiolus. The ossification at this point is completed between the twentieth and twenty-fifth years of age, so that the separation was of the nature of an epiphyseal fracture. There was profound shock and agonizing pain. The depression seemed to be little more than the thickness of the sternum. He was removed to the Massachusetts General Hospital, and in consultation with the other members of the staff it was decided to try the effect of the recumbent position, with hard pad between the shoulder-blades, and the head lower than the chest. This position was most painful, and after some hours the pad was removed.

On the next day there was no change in the position, and the patient suffered greatly from pain in the bowels, which did not yield to cathartics or enemata. He had retention, requiring the catheter. Morphine was given subcutaneously.

On the third day no change. The patient was lifted from the bed to the erect position, and, supported under either arm, was bent backwards as far as possible. This produced a sickening pain at seat of injury, and he feared he would faint, and he was put back to bed. About half an hour afterwards, on coughing and taking a deep inspiration, the bone suddenly snapped forward into place. A broad band plaster was immediately applied (such as is used in fracture of the ribs) to hold the chest walls immovable, and compel diaphragmatic respiration. The plaster was changed from time to time, and there was no re-displacement. There was slight cough for three days. Eleven days after injury he was up, and in three weeks left the hospital. There was no resulting deformity.—*Bost. Med. and Surg. Jour.*, April 12, 1888.

Dislocation [Fracture] of the Bones of the Sternum.—C. B. LYMAN, M. D., reports the following:

The patient, a passenger brakeman on the Union Pacific Railroad, was twenty-seven years old. January 22, while running up an embankment to catch a train, and when nearly at the top, he fell, and struck with his chest upon the end of a projecting tie. He suffered a good deal of pain during the day, and with every breath or movement of the body, he felt something snap at the seat of pain.

Three days after the accident the author first saw the patient. Upon examination a depression was found of merely half an inch

just below the line of the second ribs, and in the median line: with forced inspiration there was a distinct cartilaginous grating. The diagnosis was a backward dislocation of the gladiolus upon the manubrium, the second rib on each side remaining attached to the manubrium.

Reduction was attempted by manipulation of the fragments, and also by standing behind the patient and drawing the shoulders back forcibly, while the patient was made to take a deep inspiration. This, however, failed. The patient was then taken to the Union Pacific Hospital and etherized; the dislocation was then reduced by Dr. O. J. Pfeiffer and the author by depressing the upper fragment firmly, while pressure was being exerted upon the chest in the axillary line on either side, over the ribs, which were attached to the lower fragment, the object being to spring the lower fragment forward at the same moment that the upper fragment was most depressed.

This failed several times; but finally, the patient most opportunely gave a slight cough, owing to fresh ether on the sponge, just at the moment when pressure was being exerted as described, and the lower fragment came forward into line with a distinct crepitus. An adhesive strip was then placed around the chest to hold the fragments immobile for a few days. There has been no tendency to redislocation, and the fragments remain in perfect line. This case is of interest for several reasons:

1. On account of the infrequency of the accident. Poland, in Holmes' System, "says that during the last thirty years several cases" have been seen at Guy's Hospital.

2. Its method of production. Most of the cases reported, have been produced by indirect violence; this was produced by direct violence, the end of the tie striking the sternum just below the line between the manubrium and the gladiolus.

3. Because the lower fragment was displaced backwards. In almost every case on record the upper fragment has been displaced backwards instead of the lower one.—*Bost. Med. and Surg. Jour.*

Comparative Frequency of Certain of the Surgical Diseases in the White and Colored Races.—L. MC LANE TIFFANY, in a paper read before the American Surgical Association in May of last year, presented some statistics showing the comparative frequency of certain of the surgical diseases in the white and colored races. He

had found that, while negroes bore injuries and operations better than the whites, surgical diseases involving the lymphatic system, especially if tubercular, were more fatal in negroes than in whites. Carcinoma he found to be very rare in the negro, the most common malignant growths being osteo-sarcomata. Rickets occurs with astonishing frequency in colored children, but congenital deformities are very rare. Specific affections of the genito urinary organs are common among the negroes, and are apt to be more destructive because more commonly neglected.—*Med. Record*, March 10, 1888.

Suppuration and Septic Diseases.—DR. WATSON CHEYNE has recently completed a series of lectures in which he gives additional evidence, if any were needed, of the intimate relation between micro-organisms, suppuration and septic diseases. But he also shows that, while this relation is certain, the beginning and end of wound-treatment is not by any means simply the problem of keeping out these germs. In the production of septic troubles, he says: "Much depends on other conditions, of which the chief probably are the dose or number of the organisms and their concentration, general and local depression of vitality, and the seat of inoculation. If the organisms enter in large numbers, sufficient to overcome the resistance of the body, they alone may cause the disease; frequently, however, they enter in smaller numbers, and then other conditions become necessary to enable them to act. Of these conditions the chief are depressed vitality, either local or general, combined with the possibility of their remaining in the weakened tissue. This depression of vitality may be brought about by conditions acting on the body generally, such as acute fevers; or by local conditions, more especially those which induce the early stage of inflammation, such as cold, injury, chemical substances, the product of the bacteria themselves, or the products of other kinds of bacteria which may be growing along with them. Or, again, the favorable condition may be some peculiarity in the soil, as shown by variations in the character of the disease in accordance with the seat of inoculation and the anatomical arrangement of the part.

The only factor, however, on which we can reckon with certainty is the micro-organisms themselves. Outside of the body the pyogenic micro-organisms are not easily found under ordinary conditions. Very few exist in the air, but sometimes they have

been detected in surgical wards. One of the most common seats of them is the human skin, especially the folds and moist parts. They occur also in the mouth and pharynx. Dr. Cheyne thinks that they most frequently get into wounds by developing between the skin and the dressings, and in consequence especial care should be taken thoroughly to disinfect these parts.—*Med. Record*, April 14, 1888.

Capillary Drainage of the Peritoneum.—M. Pozzi made a communication to the French Society of Surgery, on Capillary Drainage of the Peritoneum after Laparotomy. It is now admitted that after certain laparotomies, drainage of the peritoneum is necessary. According to M. Pozzi, the indications for this drainage are :

1. Danger of a considerable flow of blood when the peritoneum has been much lacerated, and when resorption by the serous membrane of the effusion of blood would seem to be very difficult.
2. Danger of a septic and infectious ooze after the closing of the abdomen.

M. Pozzi then said that he would not enter into a discussion of the advantages and disadvantages of peritoneal drainage after laparotomy; he would confine himself to showing how, up to the present time, the drainage has been effected (*i. e.*, tubes of glass or rubber placed in the lower part of the cutaneous section, etc.) But this mode of drainage is sometimes unsatisfactory because the liquids are insufficiently conducted outward, and there is resorption of putrid matter. It is for this reason that he tried the use of iodoform gauze (nets and tents.) The fluids rise in these gauze bands by a *vis a fronte*. This mode of drainage has been used by Hegar and others since 1882, but in a timid way. Surgeons who used this method of drainage placed their gauze bands in a glass tube (a kind of abdominal speculum), which they stuffed and then emptied. In 1886, Mikulicz conceived the idea of placing in the very middle of the abdominal cavity a sac of iodoform gauze filled with strips of the same material.

M. Pozzi has done the same in three cases:

1. An intraligamentous cyst, the peritoneum being much lacerated during laparotomy; capillary hemorrhage abundant; ooze persistent. He placed some folds of iodoform gauze in contact with the abdominal cavity, one piece being placed in the true pelvic cavity. There was a small fistula for two months. 2.

An intraligamentous suppurating cyst with the production of papillæ. He placed a sac of iodoform gauze, filled with strips of the gauze in the cavity; aseptic healing by first intention. 3. Pyosalpingitis. Tumor very much adhering to the rectum. Pus in the true pelvis during laparotomy. Drainage by Miculicz's method. M. Pozzi withdrew the strips on the third day. Fecal matter was found in the wound. The rectum was perforated before, or had been during the operation. After a certain length of time the intestinal contents ceased to pass through the wound. There was in these cases an adhesion of the peritoneum in the true pelvic cavity. Everything went on in these cases as though one had shut the gateway of infection.—*Med. Regist.*, April 14, 1888.

Preservation of Severed Digits.—There have been published within a year, some half-dozen cases of digits severed and afterwards reunited. That there have been some failures, counts for nothing. There have certainly been no reports of any unpleasant results following the attempt. Another case can be added to those already published which presents one unusual feature—the long time that elapsed before the severed end was adjusted to the stump. "A boy while splitting wood cut off part of his right thumb. It dropped to the ground and he ran into the house. The mother hunted up the father, who came to the barn, harnessed the horse, wrapped the piece of thumb and the stump up in a rag, and drove nearly three miles to the doctor. Fully an hour and a half elapsed before I saw him. I removed the bandage, and found the thumb lying loosely in the bandage and covered with sand and dirt. I washed it off and secured it to the stump. It united promptly, and two years afterwards it would have been hard to tell which thumb had been injured."—*International Journal of Surgery*.

Treatment of Ulcers by the Transplantation of Large Pieces of Skin, after Thiersch's Method.—DR. JAMES BELL in a paper read before the Medico-Chirurgical Society of Montreal, recapitulates the essential principles of this method as follows:

1. That the part to be treated be prepared by the removal of all unhealthy granulations and diseased tissues generally, and be rendered thoroughly aseptic.
2. That the skin to be transferred to the bed thus prepared be thoroughly cleansed, rendered aseptic, and carefully removed and

applied with its under surface closely in contact with the base of the wound in such a manner as to cover it completely.

3. That the wound be kept aseptic throughout, and disturbed as little as possible.

In preparing the ulcer it will often be necessary to dissect away the skin on which it is situated throughout its whole thickness. Sometimes, even, especially on the shin—one of the commonest sites for old ulcers—it will be necessary to remove the periosteum and perhaps chisel away the outer surface of the bone over a considerable area. This, of course, involves a good deal of bleeding, whether an Esmarch's bandage has been used or not; and it may be necessary to apply a compress firmly over the wound for an hour or two before transplanting the skin. In many cases, however, it will be sufficient to scrape away the granulation bed with a Volkmann's spoon, in which case there is usually no delay from hemorrhage. The skin to be transplanted may be taken from any convenient part of the patient's body, or from another person. It is removed it strips with a sharp knife, or preferably a broad-bladed razor. The skin is to be taken to a depth sufficient to secure as nearly as possible the whole epidermic layer, the rete Malpighii being the most disirable part. It does not matter, if the papillary layer of the true skin is partially removed, but the corium should not be included.

As to the applicability of the method, there is no class or variety of non-specific ulcer which cannot be immediately prepared for the reception of flaps of skin, nor does the size of the ulcer increase the difficulty or delay the healing.

In very large ulcers skin may be taken from a limb about to be amputated, or from one or more volunteers independent of the patient. The wounds made by the removal of the skin flaps being very superficial heal rapidly, and are not followed by contraction or other ill effects of cicatrization—*Canada Med. and Surg. Jour. International Jour. of Surg. and Antiseptics.*

A German View of Intubation of the Larynx.—At the Seventeenth Congress of the German Society of Surgery, held in Berlin April 4 to 7 ult., Thiersch, of Leipzig, gave his experience with O'Dwyer's method. He has performed intubation of the larynx in thirty-two cases of diphtheritic croup. In fourteen of them he was obliged to remove the tube and perform tracheotomy, on ac-

count of attacks of suffocation. Only three patients got well after intubation, and without tracheotomy. He attributed these rather discouraging results to the exceptional gravity of croup in Leipzig. Intubation, Thiersch says, may be substituted for tracheotomy in cases of croup where there is only a limited neo-membranous formation and no swelling of the vestibule of the larynx. On the other hand, when the epiglottis is tumefied, or where there is swelling of the mucous membrane below the vocal cords, or when there is an abundant membranous formation, tracheotomy is obligatory and intubation can do no good.

In favorable cases amelioration appears immediately after placing the O'Dwyer cannula in the wind pipe.

Some of the inconveniences of intubation (to say nothing of its difficulties) are as follows: Deglutition is badly performed; the child swallows the wrong way. This is due to the presence of a stiff, open tube in the larynx, and there is also danger of pneumonia by operation (*schluckpneumonie*). On this point he was disposed to lay some stress. Sometimes the child complains of pains and indicates the seat, erosions are found in the trachea as the result of intubation, and may open the way to general infection. Sometimes the child expels the cannula in a fit of coughing. Children treated by this method need constant watching, for they are in perpetual danger of edema of the glottis, or of being choked by the membrane, and in such cases the presence of the physician is necessary to remove the tube and false membranes, and, it may be, perform tracheotomy.

Rehu, of Frankfort-on-the-Main, was of the same opinion as Thiersch on the subject of intubation. He had treated fourteen cases of croup by this method; ten of them died. The most of his patients swallowed with such difficulty after intubation that he was obliged to feed them by the esophageal sound or by lavements. In two instances the cannula was coughed up and swallowed by the patients, and afterward passed by rectum.

Rose, of Berlin, said that he was not an advocate of intubation. He was an ardent tracheotomist, having performed the operation two thousand times, with a mortality of 71.6 per cent. This gave him a percentage of 28.4 of cures, to offset 21 per cent of recoveries under intubation in America.—*Bost. Med. and Surg. Jour.*

Coccygodynia and Pruritus Ani.—DR. R. S. SUTTON states that

the faradic current of electricity is the best treatment for coccygodynia, one application giving relief and a few treatments curing it. Each séance should last for five minutes, and the frequency of treatment is to be determined by the return of the pain. The anode is placed over the sacrum and the cathode in the vagina or rectum or over the sphincter ani muscle.

For pruritus ani he recommends the galvanic current not exceeding five milliampères for five minutes. Relief, he says, is immediate, and applications once or twice daily are curative. The anode is placed over the perineum or base of the scrotum and the cathode against or within the sphincter ani.—*Med. and Surg. Rep.* May 5.

Tumor of the Stomach formed of Hair.—JOHN BERG relates the case of a young married woman aged 26 years, who had suffered for three years with symptoms of dyspepsia and anemia, but especially with vomiting of glairy mucus. During the last two years there had formed at the epigastrium a sensitive tumor which had developed more rapidly during the last six months. She entered the Hospital of the Seraphim, Stockholm, May 31, 1887. There was felt then in the epigastrium and left hypochondrium, between the prolongation of the right parasternal and of the left mamillary line, a tumor of the size of the hand, movable, with its superior border concave and inferior border convex. It could not be displaced into the region of the kidneys. The spleen was in normal position. Laparotomy determined that the tumor was in the stomach, which was opened by an incision of 6 to 8 centimeters parallel to the greater curvature. The tumor was composed of hairs, some short, others long, strongly compressed. This was cut to pieces with scissors and removed in fragments. It weighed about 900 grammes ($1\frac{3}{4}$ lbs). The wound was closed with twenty-three sutures in two tiers. Union took place by first intention. The patient went out well in three weeks.

She could not remember that she had ever eaten any hair. Her mother said that when she was three years old she had a habit of chewing and swallowing hairs.

So far as the author has been able to ascertain in the literature, the aforesaid operation is the third of the kind on record, the two preceding ones being reported by Schoenborn and Knowsley Thornton.—*Nord. Med. Arkiv.*, 1887.

Conium for Rectal Pain.—W. WHITE recommends the use of

conium as an efficient means for the relief of pain and pruritus in cases of fissura ani, hemorrhoids, etc.

The preparation upon which he relies is as follows: Two ounces of the pharmacopeial juice are evaporated over a water bath to about one and a half or two drams. This syrupy liquid is then carefully triturated with sufficient lanolin to make the weight up to one ounce. The result is a perfectly smooth adhesive ointment of a light brown or dark fawn color.

To the ointment thus prepared may be added 10 or 12 grains of persulphate of iron in order to secure an astringent effect.—*Pract.* Apr. 1888.

Salve for Bed-sores.—S. F. LANDRY recommends the following:

R̄	Zinci oleati,				
	Hydrastis pulv.,	-	-	-	aa ʒi
	Acidi carbolici,	-	-	-	m. xxx
	Petrolinæ,	-	-	-	ʒi ii

M. Ft. ung. mollis. Sig. Apply once to thrice a day.—*Med. Bulletin*, Feb. 1888.

Scrofulous Neck.—DR. WM. F. GIBB read before the Medico-Chirurgical Society of Glasgow Dec. 22, 1887 a paper in which he discussed at length the subject of scrofulous neck and its treatment. As the result of his study he draws the following conclusions:

1. In scrofulous disease of cervical glands we have a tubercular process of a mild type, seldom leading to generalized infection, but perhaps occasionally doing so; frequently concerned in predisposing to, or even directly occasioning, phthisis pulmonalis; and in the majority of cases deteriorating the general health.

2. Tubercular disease of the cervical glands is too often allowed to go on to a disastrous extent, without any active step being taken to arrest its course, largely from a prevalent indifferent and helpless feeling on the part of the medical profession.

3. Slight cases, being of course rendered every possible advantage in the matter of constitutional treatment, should be carefully watched; and if, after the lapse of months, or it may be a year or two, we find the disease spreading, it is wise to extirpate the affected glands while they are yet movable. In such cases the operation will be easy, and little or no deformity need result.

4. To quote Teale, whose directions are full and clear, surgical interference is demanded whenever a sinus resulting from a degen-

erated gland exists; whenever pus can be detected in connection with a gland; and whenever there are enlarged glands accessible to surgery in a patient in whom a caseous or suppurating gland has already been discovered.—*Glasgow. Med. Jour.* Jan. 1888.

DISEASES OF THE NERVOUS SYSTEM.

BY FRANK R. FRY, A. M., M. D.

The Ocular Symptoms of Tabes.—In a paper by Wm. Oliver Moore, M. D., Prof. of the Diseases of the Eye and Ear in the New York Post Graduate School of Medicine, on “Ocular Symptoms in Diseases of the Spinal Cord”, he says, speaking of the eye symptoms of locomotor ataxia: “During the past three years we have made notes of 80 cases of atrophy of the optic nerve, when no other history could be obtained, and of this number 32 had the signs of tabes, as shown by the absence of knee-jerk; 18 had ataxic symptoms when first seen.

“The frequency with which optic nerve atrophy occurs in tabes is differently stated. Leber found it present in 26 per cent, Gowers, in 20 per cent, Nettleship, in 50 per cent. It has been said that the percentage given by ophthalmologists is too high. I do not think so, but rather that it is due to the fact that the patient seeks advice for failing vision, where no signs of ataxia are yet present, and that the observers being on the alert for the cause of the optic atrophy, enter into an examination of the general condition of the patient and discover tabetic symptoms”.

“When the disease was supposed to be situated and limited in the posterior columns of the cord, the association with it of a peripheral degeneration of the optic nerve was an anomaly. But since the recent pathological researches of Pierret, who has shown that the degeneration of the optic nerve is not the only peripheral lesion, and that that in the cord is not the only central change, the mystery is cleared away. He has shown that there is often an independent degeneration in the cutaneous nerves, commencing in the extremities, and that the optic nerve change is strictly analogous; that there may also exist a degeneration at the central termination of the optic as well as of other cranial nerves, similar to that existing in the posterior columns of the cord.”

The optic nerve atrophy occurring in tabes is usually progressive and leads to complete blindness, though I have seen two cases where vision was not completely destroyed. One may observe no ophthalmoscopic change in the fundus, and yet amblyopia of a high grade be present; in such cases doubtless the degeneration is retro-bulbar."

"The next most frequent ocular symptom in tabes is the pupillary change. Of the four muscular actions contraction of the pupil and stimulation of the optic nerve, contraction of the sphincter in association with that of the ciliary and internal recti muscles, and contraction of the dilation fibres of the iris on stimulation of the skin, and contraction of the ciliary muscle on accommodation, some or all may be lost in association with spinal disease. These changes depend upon or leave their centers capable of separate action all of which probably lie in the tract beneath the aqueduct of Sylvius.

"The pupillary symptoms are as common in tabes as they are rare in other spinal diseases, the most common being the loss of reflex action to light, while the pupil still contracts to accommodation, the 'Argyll-Robertson' pupil, as it is called, or reflex iridoplegia. Associated with this symptom is also a loss of dilatation of the pupil on stimulation of the skin (especially of the face and neck). Next in frequency, but very much less common, is paralysis of all the intrinsic muscles of the eye, the ophthalmoplegia interna of Hutchinson. The rarest is loss of accommodation, cycloplegia, without loss of reflex action.

If we embrace all the pupillary changes, both slight and transitory and the more profound, we will find them present, according to Erb, in more than one half of all tabetic cases. Gowers, in 72 cases of primary degenerative ataxia, found the internal muscles of the eye affected in 92 per cent.

"We must not omit the paralysis of the external muscles of the eye, that is so commonly seen in tabes, usually either the abducens or the motor oculi, and rarely the fourth nerve. These muscular paralyses are frequent in the early stages of the disease; they are transient in character, and this fact has not been readily explained. Ptosis is sometimes present when no other branch of the third nerve is involved. In 203 cases of tabes collected from various sources, paralysis of ocular muscles occurred in 52, or over 25 per cent."—*Jour. of Nervous and Mental Diseases*, April, 1888.

Locomotor Ataxia Confined to the Arms, Reversal of Ordinary Progress.—Under this head Dr. S. Weir Mitchell reported to the Philadelphia Neurological Society, March 26, 1888, a case of tabes the first evidences of which were observed in the upper extremities. The unusual interest of the case will appear from the following extracts from Dr. Mitchell's report: E. C. B., M. D., of California, aged fifty-five years, was in active practice until two years ago. He has no constitutional disease of any description. By his own description he was well up to July, 1887, possessing nearly perfect health. Near to that time he observed that in writing with a steel pen he began to change—becoming unsteady. There was no tremor, certainly none manifested in his hand-writing. He only discovered that there was slightly increasing numbness in the cushions of the finger ends of both hands, extending through the hands, up the arms, through the chest and down over the belly and back. About Sept. 20 this was slightly present in the toes, but more distinctly afterwards. There seem to have been no preceding eye or bladder symptoms, or, indeed, any warning such as usually attends an outbreak of locomotor ataxia. The character of the case has not greatly changed since the first attack, it has only shown more decidedly its nature. * *

Nutrition.—The corpuscles amount to 2,980,000 per ccm. the coloring matter is 75 per cent of the normal. Certainly the appearance of the skin would seem to indicate a want of blood not shown to exist by accurate test, repeated again and again. This condition of things I have several times seen in posterior sclerosis, a not excessive want of color or corpuscles, and a whiteness of skin and mucous surfaces which once we would have accepted as sure evidence of anemia.

Sensation.—There is no pain of the character of neuralgia.

Touch.—At half an inch the compass points begin to be felt as two in the fingers of either hand. There is no remarkable difference between the two hands. The sensation of numbness with which the disease began is, perhaps, more pronounced in the legs now than at first. * * * The pain sense is everywhere preserved. The special senses appear to be normal. From the ophthalmoscopic examination I have concluded that there is beginning gray degeneration of the optic nerves, as well as disturbances of the choroid and vitreous humor.

Motion.—Motion is generally weak, when he walks any distance

he moves slowly, and in action the arms tire more easily than the legs. He stands well with his eyes open, with them shut he sways slightly, but his station may be said to be good for a man in his condition. It certainly shows how little ataxic trouble there is in the lower limbs. He moves the legs well, and the common actions of the feet exhibit little inco-ordination in these parts. On the other hand, the upper limbs are awkward in their movements. He also fails in the test of weight: he is unable to tell the difference between an ounce placed in his palm and a half ounce or an ounce and a half.

Muscular reactions. The elbow-jerk is lost on both sides. The knee-jerk is excessive on both sides and easily reinforced. The ankle-jerk is also extreme.

Reflexes.—Skin irritations of the soles of the feet appear to cause no motion. The testicle and abdominal reflexes are absent. Sexual power is lost.

Remarks.—The case stands alone in my experience. It consists of an attack of locomotor ataxia affecting practically the upper extremities. In other words, the legs now show the same condition which one is apt to see in ordinary cases of this disease in the arms after the legs are pretty well on in their course of degenerative change. The conditions seen in common cases of ataxia are here reversed. I have little doubt that in the earliest stages of this disease the tendon reactions are excessive.”

Chronic Chorea of a Severe Type Due to Ether Narcosis.—The following case is reported by Dr. Charles L. Dana:

This girl, eleven years old, is suffering from a form of chorea that may be almost termed malignant. The movements are severe, they are not unilateral, but affect each side about equally, although the right hand can be better useful; as she is right handed. There is no history of rheumatism in either parent, nor has the child ever suffered from the disease herself. Until four years ago she was strong and hearty. Then she fell and broke her arm, an accident not discovered till a week or more later. It was deemed advisable to break the arm again, in order to set it properly. This was done under ether. The uneasy little patient got the splint off and required the anesthetic a second time. Then began this chorea, which has returned regularly every fall since that time, sometimes lasting six weeks, sometimes two months. What caused it? The

fracture? Possibly, though fracture is not given as an etiological factor in chorea. Ether, however, will I know start up a neurosis; and the probable exciting cause in this case is ether narcosis. This child has been out of school for a year, so the beginning of school in the fall is not the reason choreic symptoms appear at that season. Chorea is apt to relapse in the spring and fall, more especially in the spring. This attack is far worse than those preceding it, having lasted already over eight weeks and showing no signs of abatement, but rather of increase. The patient has headaches at times, thickness of speech, constant motion of the left hand, and a heavy inelastic tread.

The remedies that suggest themselves are arsenic, quinine, iodide of iron, bromide of zinc, and cod-liver oil. Of Fowler's solution she will take six drops three times a day; and twenty drops of syrup of iodide of iron with cod-liver oil an hour after meals. The patient must be put to bed and made to stay there. Whatever builds up the nutrition will help this unfortunate child, in whom the Chorea of Sydenham manifests itself in a severe form.—*The Post Graduate*, April, 1883.

Nervous Diseases and Brass-workers.—Robert M. Simon, M. D., M. R. C. P., London, Assistant Physician to the Birmingham General Hospital, has written a very excellent and valuable thesis on brass-workers' diseases. His wide experiences make his observation valuable. The paper also shows much evidence of long and careful study of the whole literature of the subject. We quote the following from it:

"The existence of nervous diseases, especially paralysis agitans, has been said to be common amongst them (the brass-workers), but I cannot find that a larger percentage of brass-workers than of the rest of the community suffer from diseases of the nervous system. It is common, however, amongst them to meet with complaints of disturbance of digestion. They suffer from dyspepsia, loss of appetite, gastro-intestinal catarrh, nausea, vomiting, metallic taste, thirst, colic, constipation, and diarrhea. They are often nervous and hypochondriacal, complaining of headache, and muscular pains. There is nothing destructive about any of these disorders, except the obstinacy with which they resist the ordinary methods of treatment, and the readiness with which they yield to the administration of the iodide of potassium in combination of other drugs indicated by the various conditions of ill health.

Treatment of Epidemic Cerebro-Spinal Meningitis.—Drs. Chas. K. Mills, and W. C. Cahall in reporting six recent cases of the above affection that occurred in Philadelphia make the following remarks on treatment:

“Bromide of potassium, in half-dram doses, failed to relieve the headache or produce sleep in the severe cases (same result followed chloral). Nothing definite can be said as to the effect of quinine. Sodium salicylate and oil of gaultheria gave relief to the neuritic pains in the legs, but produced no appreciable benefit to the head and neck. Opium and morphia did positive good in every case, but after the more acute symptoms had passed the good effect seemed to be lost. In the two cases where iodide of potassium and the bichloride of mercury were used by Dr. Cahall, the effect was surprising to patients and physician alike. The improvement was too rapid to be the result of the alterative properties of the drugs, but more like the action of specific remedies”.—*Med. News* April 21, 1888.

Flowers of Sulphur in Sciatica.—Statements substantially as follows have been going the rounds of some of the journals, the last few months:

It is stated that enveloping the limb for one night in flowers of sulphur, will cure sciatica. The urine next morning smells strongly of sulphuretted hydrogen.

The treatment is not new, but was brought to the attention of the profession years ago by Dr. Henri Gueneau Mussy. There is no doubt of its value in some cases, as has been shown by good authority; but it is probably over lauded in the same manner as every remedy of real value in the treatment of neuralgic affections is so apt to be.

The Subcutaneous Injection of Methylal in Delirium Tremens.—PROF. V. KRAFFT EBING, of Gratz, reports the results of the subcutaneous use of methylal in twenty-one cases of delirium tremens. He finds it to be the best agent for producing relief in the disease. It is more especially adapted to an anemic condition of the nervous system, and is not so useful when hyperemia exists.—*Amer. Jour. Med. Sci.*, April, 1888.

Strychnine in Alcoholism.—PROF. DOBROURAVOW finds that strychnine is a remedy of great value in alcoholism. His conclusions are based on an experience with forty cases.

In acute cases with much excitement and wakefulness, he gives chloral with strychnine—the latter by subcutaneous injection. The nausea and vomiting which are such serious accidents, and the hepatic congestion so often present, are removed without the use of special means. He notes also that the exaggerated impressionability, the excitement and the trembling of the tongue and limbs, disappear under the action of strychnine given in increasing doses. In one instance an injection of $\frac{1}{25}$ grain caused some convulsive movements of the muscles of the lower extremities and chest, but they quickly ceased on the administration of potassium bromide. The usual injection was from $\frac{1}{100}$ to $\frac{1}{30}$ grain of the alkaloid.—*Amer. Journ. of Med. Sci.*, February, 1888.

Spasmodic Twitching of the Ears.—At a recent meeting of the Medical Society of London DR. BEEVOR showed a remarkable case of spasmodic twitching of the ears, in a young girl, consecutive to general chorea. It was rhythmic and persistent. Dr. J. Hughlings Jackson, President of the Society, was much interested in the case, and stated that he had never seen anything like it or resembling it at all.—*Brit. Med. Jour.*, Mar. 3, 1888.

Ataxia in a Brass-Worker.—At a recent meeting of the Midland Medical Society, DR. SUCKLING showed a case of ataxia in a brass worker. He pointed out the fact that ataxia with numbness of the extremities had been observed by Schlorhow in workmen at zinc foundries, the ataxia being due to a loss of muscular sense. In Suckling's case there had been numbness of the feet and hands and unsteadiness of gait for eighteen months past. He also had pains in the legs. There was no decided anesthesia or analgesia. He could not stand with his eyes closed; knee jerk was diminished but could be elicited. No green mark on the teeth. The muscular sense was much impaired. He could not distinguish between an eight-ounce and four-ounce weight hung to his toes. He had been improving under the use of potassium iodide.—*Brit. Med. Jour.*, March 3, '88.

Hypnotism in Therapeutics.—In the discussion at the Medical Society of Berlin, on Oct. 26, '87, the use of this measure was severely criticized by MENDEL, MORLI and others. These gentlemen believed it to be a dangerous remedy. Mendel considered it not only not advisable, but almost useless. His experience was that it

produced nervousness in the healthy and increased the disease from which the sick were suffering.—*Jour. of Nervous and Mental Diseases.*, Jan., '88.

Paramyoclonus Multiplex.—In the *Deut. Medicinische Wochenschrift*, Dec. 29, '87, Prof. SEELINGMUELLER reports another case of paramyoclonus multiplex. In considering the probable causes of the affection he takes exceptions to the views of French observers, that it is a general *tic convulsiv*—or a convulsive tic, that spreads from the face to involve any or all of the muscles of the body. In two cases that Seelingmueller has seen, no part of the face was ever involved. In convulsive tic, which differs, according to Marré Guinou's observations from ordinary tic, psychic phenomena are present and become a prominent clinical feature. In Seelingmueller's cases such were absent. He considers the disorder due to an increased irritability of the large ganglion cells of the anterior horns of the grey matter of the spinal cord. (*Jour. Nerv. and Men. Dis.*) Feb., '88, Friedreich, who named the affection, believed it to be brought about by a sudden vaso-motor spasm as might follow fright, or mental or physical strain. In a case which died of phthisis a careful examination was made post-mortem by Prof. Schultze, the eminent pathologist of Heidelberg. He found no lesion of the nervous system.

Variations of the Normal Knee-Jerk.—As the result of careful observation and experimentation the knee-jerk has been shown to be exceedingly susceptible to alteration in force under the influence of external conditions, depressed by hunger, fatigue, enervating weather and sleep, reinforced by any condition which increases the activity of the central nervous system, by irritation of the skin, voluntary action, exciting the attention, music, drama, etc.—*Brain*, Jan., '88.

The Nuclear Origin of the Orbito-Facial Nerve.—Both in cases of cerebral apoplexy and in bulbar paralysis, the orbicularis palpebrarum commonly escapes, while the other muscles innervated by the facial nerves are paralyzed. It is usually stated that the cortical centre for the former muscles lies in the inferior parietal lobule, while the centres for the other muscles are situated in the inferior third of the ascending frontal convolution. As the result of experimentation, Mendel has reached the conclusion that in rabbits and guinea pigs the orbito-facial has its nuclear origin in the hin-

der part of the centre for the oculo-motorius (in the Sylvian duct) which probably also innervates the levator palpebræ superioris.—*Brain*, Jan., '88.

A Case of Lingual Mono Hemiplegia, with Cortical Localization.—BERNHEIM (Nancy).—It is known through the experiments upon animals by Ferrier, and from clinical observations by Charcot and Pitre, that the lower third of the precentral (ascending frontal) convolution presides over the movements of the opposite side of the face and tongue, and that destruction of that territory produces facial and lingual hemiplegia. Therefore this centre corresponds to the lower facial and hypoglossus. It has not, however, been possible thus far to dissociate these two centres. In all cases of glossoplegia due to cortical lesion of the precentral convolution, facial paralysis has co-existed. In Bernheim's case we have an isolated lingual hemiplegia. The patient was a girl, 23 years of age, affected with multiple sarcomatous tumors, first observed in 1886. Suddenly (Jan. 8, 1887) a decided deviation of the tongue supervened, the tip pointing to the right. She swallowed easily, articulated fairly well, but could not whistle. No other paralysis was present, but the pressure shown by a dynamometer was four degrees less with the right than with the left hand. The patient died February 2, the lingual paralysis persisting. The autopsy revealed, in addition to the general sarcomata, a cortical lesion consisting of an excavation of five or six mm. in depth and diameter, caused by a sarcomatous hemorrhagic clot. The lesion was situated at the lower border of the inferior end of the precentral (ascending frontal) convolution. The conclusion from this case, therefore, is, that at the lowermost extremity of this convolution there is a special centre, the cortical centre of the hypoglossus.—*Jour. Nerv. and Men. Dis.*, Jan., '88.

OBSTETRICS AND GYNECOLOGY.

Fifty Aphorisms in Pregnancy.—E. J. KEMPF, M. D., submits the following:

1. "The safest plan is to consider every woman, whether married or single, who comes to you for treatment as pregnant until you have satisfied yourself to the contrary."

2. The physician or midwife should inform himself all about the patient's former labors, general physical status, condition of lungs and heart, etc., the presentation and position and condition of the child and the location of the placenta by external manipulation, several weeks before delivery.

3. "To find day of confinement, take last day of menstruation, say February 10, count backward three months to November 10, and add seven days=November 17. An exact reckoning of the date of confinement is impossible, errors of one or two weeks being sometimes made."

4. Direct the pregnant woman to (1) keep the bowels regular, (2) that the diet be plain and nutritious, (3) to take frequent baths, (4) not to get cold or wet, (5) to take moderate exercise, (6) to do the usual light housework, (7) to be in the open air often, (8) not to worry or get excited, (9) that the dress should be warm, loose, and there should be no pressure on the breasts, waist, or abdomen, (10) to wear an abdominal bandage, (11) to bathe the nipples in some astringent solution if they are sore, (12) to consult the family physician for any indisposition. (Mundé).

5. Moderate coition is allowable during the first seven months of pregnancy, and fondling of the breasts and nipples by the husband during the latter months is advisable. (Spaeth, *Geburtsenkunde*, 1857).

6. *Signs and Symptoms of Pregnancy.* Morning sickness occurs during the end of the first month, the second and third months, and sometimes during the fourth and fifth months. Occurring after that, it is probably abnormal. (Mundé).

7. Menstrual suppression is the rule during all the months. The menses may occur during the first, second, and third months, rarely afterward. Conception may occur when menstruation is normally absent, as in young girls, before menstruation is established, and after the change of life, and during lactation.

8. At the beginning of the third month mammary areolæ become turgid. This is not a reliable sign, as it may occur in uterine or ovarian disease. (Playfair).

9. Abdomen begins to enlarge during the third month, and becomes marked during the fourth, when the uterus rises three fingers' breadth above the symphysis pubis; during the fifth it occupies the hypogastric region; during the sixth it rises to the umbilicus; during the seventh two inches upward; during the eighth and

ninth months it gradually enlarges until it reaches the ensiform cartilage. For about a week before delivery the uterus sinks somewhat into the pelvic cavity. (Playfair).

10. Fetal movements start in at about the middle of the fifth month. These movements may be simulated by irregular contractions of abdominal muscles or flatus within the bowels. (Playfair).

11. Ballottement will be of service at the end of the fourth month to the end of the sixth month. (Playfair).

12. Uterine souffle can be heard at the end of the fourth month, and until the term ends. (Playfair).

13. Fetal heart sound can be made out during the fifth, sixth, seventh, eight and ninth months. The pulsation is likened to the tic-tac of a watch under a pillow. Steinbach makes the beat 131 for male children, and 138 for females, but this is not practical. The beat is most easily heard when the back of the child lies to the abdomen of mother. An accelerated or irregular beat, preceding or during labor, means danger to the child. There is no relation between the fetal and maternal pulse.

14. The most valuable signs of pregnancy are fetal heart pulsation, fetal movements, ballottement, and intermittent contractions of the uterus.

15. Miscellaneous signs of pregnancy are dusky hue of the vagina, dentalgia, facial neuralgia, tendency to syncope, salivation, unusual gratification during some particular act of coitus. (Mundé).

16. The unimpregnated uterus measures two and a half inches, and weighs one ounce, at term it measures six times as many inches, and weighs twenty-four times as many ounces. The cervix uteri does not shorten during pregnancy, except during the fortnight preceding delivery, which is due to incipient uterine contraction. The cervix begins to soften by the end of the fourth month; by end of the sixth month one half is thus altered; by the eighth, the whole of it. The os is generally patulous. (Playfair).

17. *Diagnosis of Pregnancy by External Manipulation.* By inspection we may learn the general contour of the abdominal enlargement, whether it be of the usual pear shape or broader, as is the case with shoulder presentations. Where there are twins side by side, there is usually a depression or sulcus between them, and the uterus is broader transversely. If the twins be placed one in

front of the other no difference can be noted in the breadth of the uterus.

18. By percussion we make out the outlines of the uterus.

19. By palpation we feel the outlines of the uterine tumor, the prominent parts of the child, the round, hard, bony head, the soft breech, the knees, the feet, the elbows, the round, arched back, and the movements of the child.

20. By auscultation we may learn the condition, the presentation, the position, and the sex of the fetus, and the location of the placenta. (Wilson).

21. The position of the fetus is generally head downward, and breech toward the fundus uteri. (Playfair).

22. *Spurious Pregnancy.* Pregnancy is simulated by pelvic or abnormal tumor, obesity, ascites, tympanites, distention due to retained menstrual blood, amenorrhea, etc. A careful physical examination is the only guard against a mistake. (Mundé).

23. *Abnormal Pregnancy.* Extra-uterine gestation—early treatment, the faradic current, late treatment, laparotomy—is very dangerous. Molar pregnancy, be it hydatidiform, carneous, or spurious, calls for complete removal of the mass. Hydramnios may necessitate premature delivery. (Mundé).

24. *Disorders of Pregnancy.* Vomiting of pregnancy, as a rule, needs no treatment, but, if excessive, it is relieved the quickest by the application of cocaine and vaseline (one in fifty) against the os uteri, and by one sixteenth of a grain of cocaine, internally, frequently repeated. When vomiting of pregnancy becomes so persistent that it resists all treatment and threatens to destroy the pregnant female, abortion or premature labor may become necessary, but should never be undertaken without a consultation. (Mundé).

25. Anemia: the best treatment for this is good food, light, air, exercise, iron, and arsenic, and removal of the cause, if possible.

26. Plethora may call for saline laxatives and restriction of albuminoid food.

27. In constipation direct a regular hour of the day for going to the closet, and give compound licorice powder, or cascara sagrada, or enemata.

28. Diarrhea should never be neglected, as it may lead to abortion or premature labor. Give paregoric and tincture of catechu, or acetate of lead, opium, and ipecac, and keep the patient quiet.

29. Leucorrhea calls for vaginal washing with carbolized tepid water.

30. Pruritus, which may be general or local, treat with soda baths if the former, and, if the latter, treat with carbolic acid in glycerine, nitrate of silver in mild solution, cocaine in rose-water, hydrate of chloral in water, etc.

31. Frequent micturition may often be relieved by an abdominal supporter. So also incontinence of urine. Strychnia, belladonna, or cantharides may be tried in both troubles.

32. In varicose veins, besides applying a flannel bandage or a silk stocking, instruct the woman how to apply a compress and bandage in a case of rupture of a vein, as the hemorrhage may be great.

33. Diabetes, albuminuria, jaundice, neuralgia, hemorrhoids, etc., during pregnancy, call for the same treatment as when occurring at other times.

34. Uterine displacements call for replacement, followed by the application of an appropriate pessary and supporter.

35. False pains may come on at any time during pregnancy, and can not be told from true pains except that the former are relieved by opium.

36. High temperature in the mother is not necessarily incompatible with fetal life.

37. *Immature delivery.* Abortion is the expulsion of the ovum before the formation of the placenta (twelfth week); miscarriage, its expulsion before the period of viability (twenty-eighth week); premature delivery, its expulsion between the twenty-eighth and thirty-eighth week. (Mundé).

38. Causes of immature delivery are predisposing, dependent on a constitutional affection; and exciting, dependent on mechanical or emotional violence. Symptoms are pain and hemorrhage, and dilatation of the os of uteri. Dangers to mother from sepsis, fatal hemorrhage, perimetric inflammation, carneous moles. Dangers to child—want of viability.

39. Treatment is prophylactic by fluid extract black haw, and removal or avoidance of cause; preventive by rest, opium, and black haw, and, in inevitable cases of abortion, empty the uterus and check the bleeding by rest and ergot, by tampon, and after dilatation of cervix by fingers or dull curette. (Mundé).

40. Miscarriage should be treated like abortion, and premature labor like labor at full term.

41. Artificial abortion is best performed, up to the fifth month, by dilatation of the cervix with the steel-branched dilator; it is done because of (1) persistent vomiting, (2) organic visceral lesion, (3) incarcerated uterus, (4) deformity of pelvis, (5) presence of large tumors. (Mundé).

42. Premature labor is best induced by catheterization of the uterus—not rupture of membranes, for (1) dyspnea from enormous distention of the abdomen from any cause, (2) hemorrhage from placenta previa, (3) uncontrollable vomiting, (4) organic heart trouble, (5) habitual death of the fetus, (6) pelvic contraction of moderate degree, (7) hopeless condition of the mother, (8) where in previous labors there have been unusually large children. (Mundé).

43. *Fetus.* Fetus at first month is rarely to be detected in abortions. At second month it weighs sixty grains measures six to eight lines, head and extremities are visible, eyes are two black spots on side of head, umbilical cord is straight, the clavicle and inferior maxillary bones begin to ossify. At third month the embryo weighs from seventy to three hundred grains, measures from two to three inches, fore-arm is formed, fingers can be traced, placenta is formed. At fourth month weight is from four to six ounces, length six inches, sex of the child can be made out. At fifth month, weight, ten ounces; length, ten inches; hair and nails beginning. At sixth month, weight, one pound; length, eleven to twelve inches, membrana pupillaris; eyebrows. At seventh month, weight, three or four pounds; length, thirteen to fifteen inches; eyelids are open; testicles in scrotum; clitoris prominent. At eighth month, weight, four to five pounds; length, sixteen to eighteen inches; nails; membrana pupillaris has disappeared. At ninth month, weight, six to eight pounds; length, nineteen to twenty inches; males somewhat heavier than females. (Playfair).

44. *Signs of Death of Fetus.* Before labor the signs of death of the fetus are, (1) loss of fetal heart beat, (2) loss of fetal motion, (3) sense of dull weight in the uterine region felt by mother, (4) sense of coldness in the womb, (5) putrescent feter in the discharges, (6) discharge of flatus from the uterus.

45. *The Placenta, Liquor Amnii, etc.* The placenta supplies nutriment to and aerates the blood of the fetus. It may be situated any where in the uterine cavity. The umbilical cord is the channel of communication between the fetus and placenta.

The placenta at full term is a moist mass, containing a great deal of blood; spongy in texture; about seven inches in diameter; usually oval; one surface smooth, facing the cavity in which the fetus lies, the other surface rough, fastened to the walls of the uterus. The color is reddish, but varies in tint according to the condition of the blood.

46. Liquor amnii is secreted by the amnion and the allantois, it affords a fluid medium in which the fetus floats, and so is protected from shocks and jars, it saves the uterus from injury from the movements of the fetus, and in labor it lubricates the passages. It has nothing to do with the nourishment of the fetus.

47. The uterine and placental murmurs are not usually taken notice of in the diagnosis of pregnancy.

48. Knots in the umbilical cord are brought about by passage of the child through a loop in the cord, generally during labor.

49. In twins, triplets, etc., there may be one placenta or more than one. If two fetuses, these may be joined by two cords to one placenta. This can not be made out during pregnancy.

50. "So-called maternal impressions, monstrosities, marks, etc., are the result of arrest of evolution due to pressure by amniotic bands, pressure by the umbilical cord, adhesions of the placenta, or to some pathological condition of the fetus or its membranes, or to heredity.—*Am. Pract. and News*, Feb. 18.

Case of Saenger's Cesarean Section.—L. E. NEALE reports a case of the above operation performed upon a colored woman, aged 20, primipara, the pregnancy being complicated by hydramnios. Labor commenced at 4 A. M., Dec. 11, membranes ruptured at 8 A. M., before full dilatation. Tarnier's forceps were applied at 1 P. M. to head freely movable above superior strait in R. O. I. P. Efforts at extraction were continued for one hour and three minutes without result except bruising the child's scalp, and left the mother in apparently good condition.

The entire escape of the liquor amnii, firm uterine contraction and retraction over the child and well-marked development of Bandl's ring, Dr. Neale thinks, rendered version practically impossible and dangerous. Dystocia was due to a generally contracted non-rachitic pelvis.

On consultation it was deemed best to perform Saenger's Cesarean section, which was done with the woman's consent, com-

mencing at 6:15 P. M. the same day. The operation lasted one hour and a half by gaslight, chloroform being the anesthetic and bichloride of mercury the antiseptic.

The operation was performed in the usual manner, and a living child extracted, but the woman never rallied from the operation, and died forty-four hours after the operation. Post mortem examination showed slight traumatic peritonitis, and the diagnosis was given that death resulted from shock.

The following measurements were taken:

		Inches.
Diameters of pelvic brim.	{ antero-posterior, - - - - -	2 $\frac{3}{4}$
	{ transverse, - - - - -	4 $\frac{1}{4}$
	{ oblique, - - - - -	4 $\frac{1}{4}$
Diameters of fetal head.	{ occipito-frontal, - - - - -	5 $\frac{1}{2}$
	{ suboccipito-bregmatic, - - - - -	4 $\frac{1}{2}$
	{ occipito-mental, - - - - -	6
	{ fronto-mental, - - - - -	4
	{ biparietal, - - - - -	4 $\frac{1}{4}$
	{ bitemporal, - - - - -	3 $\frac{1}{2}$
Circumference.	{ bimastoid, - - - - -	3 $\frac{1}{2}$
	{ occipito-frontal, - - - - -	14 $\frac{1}{2}$
	{ suboccipito-bregmatic, - - - - -	13 $\frac{1}{2}$
Length. 19 $\frac{1}{2}$ inches, weight, 8 lbs., 14 oz.		

"The head was hard, thoroughly ossified, non-compressible, and as the above measurements and clinical history actually demonstrate, could not have been delivered *per vias naturales* by any conservative or non-destructive operation.

In his remarks upon the case, Dr. Neale writes as follows, concerning pelvimetry, expressing opinions which I would most heartily endorse.

"*Ceteris paribus* I consider him a bold man, indeed, who would unhesitatingly cast the beam for life or death of the unborn human being merely by the addition or subtraction of a fourth or a third of an inch in pelvimetry. This is patent when we remember that there is only one diameter of the pelvic brim, the *conjugata vera*, that can be measured sometimes, not always, under certain favorable conditions, not under all, with any degree of positive or absolute accuracy. But it is still more palpably true when we remember that we have no means of accurately measuring the head, or, indeed, any other part of the unborn child, and this fact alone must necessarily invalidate, and that to a considerable extent, the practical importance of pelvimetry in the class of cases under consideration.

"Neither is the resistance of the maternal soft parts, nor the compressibility of the fetal skull identically the same in all cases. And would it be far amiss to say that the ability of the operator, the condition of the patient and her surroundings, may often more or less determine the nature and particularly the result of the operation."—*Med. News*, March 10, '88.

[Dr. G. Zinke recently (Jan. 30, '88) reported to the Cincinnati Academy of Medicine (*Jour. of Am. Med. Assoc.*, April 7) a case in which he had performed this operation; mother died on the seventh day; the child was saved. We have received a personal letter from Dr. H. H. Vinke, of St. Charles, Mo., stating that he has recently performed the operation. The woman died on the third day with symptoms which the doctor refers to opium narcosis. The child at last report was living and thriving. Dr. Vinke is informed by Dr. R.P. Harris, of Philadelphia, the best authority in the United States on all statistics regarding the Cesarean section, that his case was the sixteenth section by the Saenger method in this country, six women and eleven children being saved.—ED.]

Ergot in Obstetrics.—JOEL W. HYDE read a paper before the Medical Society of the County of Kings (N. Y.) Nov. 15, of which the following sentences form the summary.

1. Ergot, administered prior to delivery, produces a frightful mortality among the infants.

2. It is liable to produce rupture of the uterus, as well as of other maternal soft parts.

3. It is improper treatment, in lingering labors, with inertia uteri, as the forceps are far safer to both mother and child.

4. Ergot is a more frequent cause of the retention of the placenta than all other causes.

5. It adds much needless distress to already exhausted mothers by the prolonged after-pains.

6. The retained placenta is frequently the cause of other disasters, the manual or instrumental interference necessary to dislodge it often producing traumatism or sepsis, or both; and from these we may have perimetritis, suppression of the lochia, suppression of the milk, and we may even have puerperal insanity and embolism as indirect sequences.

The same argument may apply to the retention of clots.

7. It is a very potent factor in the production of subinvolution and displacements.

8. Ergot is never necessary. If there is no more than the usual moderate hemorrhage which ordinarily accompanies a delivery, the uterus will take care of itself. If there should be a sudden and alarming hemorrhage, the patient is already suffering from shock, therefore the use of ergot by the stomach would be useless, and if it was not immediately rejected, it would not be absorbed.

The hot water intra-uterine douche is efficient and preferable for controlling the hemorrhage.

In dangerous cases of post-partum hemorrhage, the hypodermic injection of ergot may be used, as this would be of value as against the negative results of ergot by the stomach.

9. Ergot has been condemned and abandoned by many of the largest maternities in Europe and this country.—*Brooklyn Med. Jour.*, Feb., '88.

Remarkable Survival of a New born Child.—PAUL F. MUNDÉ states that while house physician to the Maternity Hospital at Würzburg, Bavaria, in 1869, a primipara with her child was brought into the hospital with the following statement. While workmen were working at a sewer drain in a yard they heard screams of a child apparently coming from the drain. They rapidly opened the drain and found a full grown new-born infant struggling in the filth, and rescued it. On investigating at once, in the water-closet on the *second* floor was found the cook of the family, an unmarried woman, collapsed on the floor. On being revived she acknowledged being the mother of the child and said that she was suddenly seized with an uncontrollable desire to go to stool, and when on the seat felt something rushing from her and fainted. The child bore signs of having passed rapidly down the drainpipe. It was badly scratched and bruised but was otherwise well and it thrived. It weighed about ten pounds.—*N. Y. Med. Journal*, April 14, 1888.

Influence of Obesity upon the Menstrual and Reproductive Functions.—DR. A. F. CURRIER claims that obesity in young women is usually attended by sterility, and that if pregnancy occurs the offspring is likely to show inferior vitality. There is generally some disturbance of menstruation, the flow being absent or diminished in quantity or changed in character or accompanied with pain; or there may be vicarious menstruation or impaired physical and mental powers. He regards the general and local use of electricity as among the most efficient means of treatment.

FOREIGN CORRESPONDENCE.

BERLIN LETTER.

BERLIN JUNE 17, 1888.

EDITOR COURIER OF MEDICINE.—On the 14th of this month I visited Professor Bergmann's clinic. A patient with cancer of the tongue was brought in by his assistants. A student was called down into the arena to examine the patient, and was then quizzed by Prof. Bergmann on the subject of cancer in general. I have visited Prof. Bergmann's Clinic at different times, and must admit that I am surprised and pained to see how little these young men, who are required to study five long years, seem to know about medicine and surgery, and to the credit of the American student of medicine it may be safely asserted, that he compares more than favorably with his German colleagues. I will state in this connection that over one half of the students here have duel-marks, usually on the left side of the face. I am told that they are proud of these marks, and that they irritate the first cuts, so that they may leave large and prominent scars. Herein there are evidently successful, for some of these scars which are always ugly, disfigure the proud possessor of the same for life. It is possible that a good deal of time is wasted by these *studentes medicinæ* at the *Mansur*, and in beer saloons, which might have been used more profitably in studying.

Prof. Bergmann made a few remarks on the subject of cancer, and referred to two important features in this connection: 1. Early recognition of the suspected growth; 2, the diagnosis being established, timely and complete extirpation of the affected part. When he pointed out that the occasional removal, scraping away or cutting off of small portions of cancerous growth was harmful, and that nothing short of the entire removal of the affected part could save the patient, he was vociferously applauded by all the physicians and students present.

The next day, on the 15, the Emperor died, and no one doubts now any more that he died of carcinoma laryngis. No one will deny that Bergmann is a fine diagnostician, and a marvelously brilliant and bold operator, but inasmuch as the operation of laryngectomy is such a serious and fatal one, the expectant plan of treatment adopted by Dr. Mackenzie in the Emperor's case, was probably the most rational procedure. This week's *Klinische Wochenschrift* contains an interesting paper on the subject of carcinoma laryngis. It appears that up to the present time 68 cases of total extirpation of the larynx have been reported, a table of which is appended. In glancing over the table I notice that 13 of the reported cases are of such recent date, that it is as yet impossible to determine the possible issue. Of the remaining 55 cases, nine lived after the 16th month and might, therefore, be considered cured. The operation in all the cases was done for carcinoma laryngis, but the correctness of the diagnosis in several of the successful laryngectomies might reasonably be doubted.

A few days ago I saw Dr. Hahn in the Friedrichsheim Krankenhaus perform resection of the head of the femur for non-union, in an adult. The patient related that a year ago he fell and broke his right femur, sustaining an intra-capsular fracture. A proper splint and dressing had been applied, but when the same was removed after a time, he was absolutely unable to walk. At present the limb was entirely useless to him, and he was anxious to be operated upon. Upon forcible manipulation crepitus could be elicited. The patient being well under the influence of chloroform, which anesthetic is exclusively used in Berlin, Dr. Hahn cut down upon the great trochanter making a large transverse incision, and removed the head of the femur, which had failed to unite with the shaft of the bone. This is the tenth operation of its kind reported up to the present time. Of these Dr. Hahn performed eight, one was done in America and one in Austria. Dr. Hahn informed me that the result of these operations as to the usefulness of the limb had always been good, and that no death as yet has taken place after the same. Dr. Hahn is a courteous and pleasant gentleman, and a bold and daring operator, but does not seem to appreciate properly the necessity of aseptic surgery. Gallons of antiseptic solutions are used during an operation, but the operator during the operation will handle portions of the patient's body or garment, or some pieces of furniture which are not disinfected and possibly soiled,

and then introduce the same hand, without first washing the same, into the wound. His assistants are very careful and pains-taking, and cleanse the wounds thoroughly with antiseptic solutions before applying the sutures: if it were not for these precautions, I have no doubt that septic troubles would be of frequent occurrence at the Krankenhaus. But I had an opportunity to see that septicemia does take place, even with these precautions. A boy of about 12 years, was brought into the operating room in whom the left knee joint had been resected for ankylosis. When the dressing was removed the limb was found swollen and erysipelatous, the wound gaped, the edges of the same were discolored and gangrenous, the ends of the bones were black, a sickening fetor was emitted from the wound. The little patient had a high fever, septicemia had set in. Amputation of the thigh through the lower third was done, the flaps were not stitched, but simply brought together by means of bandages.

H. H. V.

ENGRAVED PORTRAIT OF DR. AGNEW.—At the last meeting of the Ophthalmological and Otological Section of the New York Academy of Medicine, a motion was made and carried, as the result of which a committee was appointed to obtain a good photograph of the late Dr. Cornelius R. Agnew, for the purpose of having made from this engravings suitable for framing. The right of issue and sale of such engravings will be given to some first-class publisher, if practicable; if not, the committee shall offer them to the profession at cost.

Members of the profession who desire such an engraving accompanied by an autograph signature, should send their names and addresses to the Secretary of the Committee, Dr. Charles H. May, 640 Madison Avenue, New York City at once. When all such names shall have been recorded, those who have requested a copy of the engraving will be notified of the cost of the same, by the publisher, or by the committee having the matter in charge.

Doubtless many of Dr. Agnew's friends will be glad to avail themselves of the opportunity to secure such a portrait.

SOCIETY PROCEEDINGS.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated meeting January 24, 1888, Dr. BARCLAY in the chair.

CANCER OF THE KIDNEY.

Dr. Hauck presented a specimen of cancer of the kidney. The first symptom presented (last August) in the case was the presence of blood in the urine which yielded to treatment in a short time. About six weeks later, however Dr. Hauck's brother saw the case, and then found a tumor the size of the fist in the region of the right kidney. He pronounced it cancer of the kidney, and advised an operation, which was refused. The tumor continued to grow. Other physicians also pronounced it cancer of the kidney. Nothing was done except to relieve the suffering, and he finally died about a week ago. He showed slight edema of the lower extremities, slight dropsy of the abdomen; and his body was very much emaciated, nothing but skin and bones. He suffered very little pain, however, and took nourishment up to the last. Upon opening the abdomen post-mortem about a pint of serous fluid escaped from the peritoneum. About four weeks before the boy died Dr. H. tapped the tumor, but got nothing but a little gelatinous fluid, which under the microscope showed nothing positive, only blood globules and a little serum with detritus, but no specific cells. There was also secondary cancer of the liver and lungs. The spleen was entirely normal, perhaps a little enlarged, but there was no cancer of the left kidney. There was a syphilitic history in the case, but antisiphilitic remedies used quite heroically seemed to have no effect at all.

Dr. Homan asked whether the matter of tuberculosis had been considered. In some animals at least tuberculosis of the peritoneal surfaces looks very much as that does, in cattle for instance, com-

monly called the "pearl disease" from the appearance of the nodules.

Dr. Fry asked *Dr. Grindon* if visceral syphilis is a usual form of hereditary syphilis, or if it is as common as in acquired syphilis?

Dr. Grindon was not prepared to answer as to the relative frequency, but thought it quite frequent in both forms.

Dr. Hauck said he was not at all certain what this tumor really was, and he had not had opportunity to make a close microscopical examination as yet. Portions from different parts of it were now hardening preparatory to making sections.

PEROXIDE OF HYDROGEN.

Dr. Love remarked that peroxide of hydrogen is not a new remedy. It was discovered in 1818. The manner of its preparation is by a dilute acid acting upon the peroxide of barium. It is a syrupy liquid of a bitterish taste, and in the form in which we buy it has been diluted so that it contains about ten volumes of water, and it is then a clear liquid, not unpleasant to the taste. Most of the specimens are slightly sulphurous in odor, although it is described as being odorless. He thinks it most valuable as a surgical dressing for washing out pus cavities, sinuses, etc. He had used it quite extensively in diphtheria both pharyngeal and nasal, and had found it most valuable as an oxidizer of the diphtherial membrane. The manner of its application had been with a syringe, applying it direct. He had little trouble in securing the consent of the child after gaining its confidence and after it gets accustomed to the manipulation. In addition to affecting the membrane, it deodorizes everything that it reaches; it oxidizes the secretions and enables them to be thrown off promptly, leaving a clean surface, an agreeable taste and feeling in the throat, and an agreeable absence of unpleasant odor in the nose, and in purulent conditions of the nasal surfaces, with rapid accumulation of discharges, keeps the parts absolutely open and cleansed. His rule has been to apply it about once every four hours, and where necessary to apply it himself or see it done. If the nurse can be trusted he leaves it to her. He had seen a very large surface of the membrane rapidly oxidized and cleaned within a few hours in the pharyngeal and faucial space, but it required frequent applications. No matter how fetid the discharge may be, after the application of the remedy all the

fetor has passed off. In a case of cancer of the womb, with an immense amount of ulceration, where there was an enormous amount of discharge, with a horrible odor—driving everyone from the room and house, a thorough cleansing by exposure with the speculum had a very beneficial effect, and while of course healing was not secured, a great amelioration of the symptoms was obtained. He had had satisfaction in the use of this solution in cases of offensive and purulent nasal catarrh of years standing, offensive to the patient and everyone else; the breath so offensive as to make everyone avoid them and they avoid company. By applying and teaching the patient to apply this solution, he had not only relieved the symptoms but diminished the secretions, and after some weeks' use of the remedy had made pretty rapid progress in the direction of a cure. In one case of bronchitis with general catarrhal inflammation, such a case as we call catarrhal fever, where all the mucous membranes were violently inflamed, with irritation of the posterior nares to the extent of the development of a reflex laryngeal asthma, the irritation of the posterior nares was relieved and the accumulation scoured off by the application of the peroxide of hydrogen, and after coughing, and sneezing and clearing the parts of the accumulated secretions, the patient secured perfect rest all night until towards morning the accumulation appeared again, and being relieved once more in the morning rest was again obtained until evening. One case of whooping cough was very decidedly relieved by its application to the fauces and nasal surfaces by means of a syringe and the spray.

Dr. Homan remarked that even if it is not a curative agent, it must be a very excellent deodorizer from the effect reported in the case of cancer, and even if it does no more than control the offensive smells in such cases, it is valuable. He would like to know how long an application of the remedy served to deodorize the part?

Dr. Love said from two to three sometimes four days.

Dr. Grindon said that the remedy has been used in removing pigment, especially about the hair. Sometime ago the celebrated showman, Forepaugh had a white elephant; Barnum, of course, determined to get a white elephant also, but he did not have time to send abroad for one, so he had one whitened. A committee of dermatologists was appointed to examine it, and they reported to the dermatological society that it had been whitened with hydro-

gen peroxide. It was about the color of cigar ashes; while the elephant Forepaugh had was really a white elephant.

Dr. Barclay remarked that in cases of chronic otorrhea, where there is a perforation of the drum-head, this remedy is of the greatest value; in cases where it is very difficult to remove the pus. If gentlemen will carefully cleanse the parts with a tympanic syringe and then use the proxide of hydrogen, and use powders carefully afterwards, they will find their cases very greatly benefited, and by far less offensive to those about them.

Dr. Love mentioned several cases of inguinal sinuses from syphilitic infection of the glands, where all means previously used had failed to secure a closure of the sinus, in which applications of this drug applied by washing out and cleansing the part and keeping the sinus filled with a piece of lint wet in the solution changed twice a day, secured a rapid healing. So also in a case of fistula in ano, which was very extensive and very deep with two branches, one of which cut very deep into the natis on one side so that it was very difficult to keep it open; and one branch which was blind and could not be connected with the rectum, he had used it in the same way with success. Canker sores produced by disturbance in the stomach, when we have one, two or three ulcers in the mouth or on the tongue, which are very intractable, which give not only the patient but the physician great annoyance yield promptly to this agent.

Stated meeting March 20, 1888, DR. DEAN in the chair.

Dr. Hardway read a paper (vide p. 285, May COURIER) on
CASES OF SKIN DISEASES.

Dr. Joseph Grindon remarked on the many possible causes of eczema, internal and external, dyspepsia, constipation, errors of diet, and the various form of Bright's disease, in children dentition and general debility, defective innervation. Among external causes are the presence of parasites, vegetable or animal, various irritating substances met with in various avocations. But not one of them alone will account for the existence of eczema, because there are people who come in contact with all of those various things who do not have eczema. The fact certainly remains that some people have eczema from exciting causes apparently no more violent than in the case of those who escape it. He was quite

sure, although he had no notes with him that the proportion of cases of scabies seen at the clinic of the St. Louis Medical College as compared to the total number is larger than that mentioned by Dr. Hardaway. Probably, however, the proportion of cases which the doctor sees now is larger than that, because as he says up to a few years ago he saw comparatively few cases, now he sees a good many more. He thinks that thirty per cent of all the cases of skin diseases seen at the St. Louis Medical College clinic have been cases of scabies. For one year it certainly was thirty per cent. This is probably due to the location of the clinic. A large proportion of these persons have been at work on the river, and they are mostly from the poorer and lower classes, the clinic being further down town. Of herpes zoster there was one case that perhaps deserves special attention. It occurred in a little child about 12 years of age, who presented herself at the laryngological clinic and was sent to him for inspection. She had evidently had a herpes zoster at one time, and there was a succession of cheloid patches extending around one side of the body looking so far as the shape of the patches was concerned, exactly like herpes zoster. There is a predisposition to cheloid in the negro race.

Dr. Frank Glasgow expressed appreciation of the immense amount of work involved in the preparation of Dr. Hardaway's paper. He thinks, however, that we can draw no inference as to the relative frequency of diseases here and in the old countries from this paper, for the people here are not educated up to a proper appreciation of specialism as they are in the old countries. A much larger percentage of cases of diseases of the skin go to the various general practitioners, than in the older countries. So we cannot draw any inference with regard to the relative frequency of diseases in the country as large.

Dr. Leete asked whether or not it is a fact in respect to eczema that the environment is not sufficient to explain the occurrence of the disease without insisting upon any peculiar diathesis. In respect of the disease that the doctor had euphoniously named prairie itch or Texas scratches, if it had been observed, or if the notion has been entertained that it is caused by improper and insufficient clothing, or whether that has been considered an important factor in the production of the disease.

Dr. Hardaway thinks the figures given do give a fair idea of the relative frequency and character of diseases prevailing in Amer-

ica. Dr. Thomas C. Waite at the Centennial Congress held at Philadelphia in 1876 read a paper in which he gave a large number of figures on skin diseases, and drew deductions showing how certain diseases are more prevalent in Austria, others in Scotland, and others in America. So that we are in a position with a number of such data, to conclude what the proportion of such diseases in certain countries is. In a number of cases of scabies, say ten thousand cases seen in public practice, two thousand and some odd were in Scotland. The Scotch are notorious scratchers, and they have all kinds of skin diseases. You will remember the well known saying "God bless the Duke of Argyle" which is said to have originated in consequence of a rough monument having been erected to the Duke against which the people scratched themselves.

He remarked that he had had a number of unusual rare cases of skin diseases. The explanation was that in the beginning of his practice as a dermatologist he was comparatively alone in the field, and as regards clinical work was entirely so, as there was no other dermatologist here, so that most of these cases were presented to him, whereas latterly the field has also been shared by others, and consequently he had not seen so many of these rare cases.

By environment is meant all those conditions which surround a patient regarding diet, clothing, etc., and of course these must play an important part in the production of eczema. He looks upon eczema as due to some special condition of the skin not diathetic, perhaps, because both external and internal diseases may be the cause of eczema. Eczema is protean in its pathological relation, more so than in its forms. If we watch the cases of eczema as they come to us, we must conclude that the factors are innumerable. Why when two persons are exposed to the same influence one should have eczema and the other escape, it is very difficult to understand, unless we assume in the one a particular susceptibility of the skin that is not possessed by the other.

Dr. Dean said that many years ago in New York he used to see a great deal of pruritus which was attributed to eating buck-wheat cakes. He saw very little of it afterwards, even among those who used buckwheat flour, and it was stated that the probable reason for the disappearance of the trouble was the difficulty of procuring pure buckwheat.

Dr. Hardaway said there is no doubt that buckwheat and oat-meal do cause pruritus. But there are doubtless large numbers of people who have pruritus from other causes also. For instance he had had people under his care who, winter after winter, for eight or nine years, would return with the trouble. He knew from personal observation that those who indulge in buckwheat and oat-meal are affected with pruritus. But that is only a factor in the case; a change of weather from cold to warm will in some persons cause the disease to disappear.

Dr. Homan asked if the quantity of sweets, syrups, etc., taken in connection with the buckwheat, oat-meal and other flours, does not aid to some degree in producing the trouble.

Dr. Hardaway thinks that it does, and remarked that *Dr. Waite* in his article on skin diseases makes that point. In answer to *Dr. Leete's* question, *Dr. Hardaway* stated that a gentleman from Texas who was present says that a great number of cases of prairie scratches have come under his observation in Texas; and the wearing of proper clothing does not seem to produce any effect; so far as he has observed, the use of insufficient clothing does not play any part in the production of the disease. Several thousand of these cases were reported in the southern part of Illinois, as a peculiar and unusual form of skin disease. When he examined into the trouble he found that they were nothing but scabies.

Dr. Leete explained that he asked that question about the clothing because, having had three years' experience in the South, his experience was that the people generally were negligent in regard to the manner in which they clothed themselves; especially so in regard to the underwear, which, even in winter, was rarely anything but cotton. Frequently it was only cotton drilling, but sometimes canton flannel was used. Certainly cotton clothing is far from a good clothing in cold weather. Further his observation in the South was that when the weather is cold there it is much more felt by people than cold in a higher latitude where the atmosphere is not so highly charged with moisture. The fact seemed to come out quite plainly that this sudden skin discomfort was due in part, at least, to the sudden and marked chilling of the surface when one went from indoors out into the sharp cold. It has sometimes been remarked that those parts of the body that are most constantly reached and affected by the wind would be the seat of this trouble in a degree quite different from other parts

kept more constantly in a comfortable temperature. Therefore in the beginning of the cold weather the body should be clothed so that the surface will not be chilled going into the outer air. If this precaution was observed there would be much less of this discomfort.

Dr. Nelson read a paper (vide p. 417, May *COURIER*) on
RESPONSIBILITY OF PHYSICIANS AND LAYMEN AS REGARDS INFEC-
TIOUS DISEASES.

Dr. Homan said that within the last few months an epidemic of smallpox had been caused in the northern part of the state which, it is thought, could be traced to a small-pox patient traveling in a railway coach. (Vid. report on p. 55, July *COURIER*).

Dr. Glasgow recognized the criminal negligence of those who have contagious diseases exposing others to the contagion, but remarked that we have no place here to send persons with contagious diseases, such as the measles, scarlatina or diphtheria. Quarantine hospital for small-pox patients cannot be utilized for patients with the other diseases enumerated; and the patients will not be received into any of the general hospitals; they cannot go to boarding houses, in fact they are required to leave them; so that there seems to be no place in this city where these cases can be sent. He had suggested that a special hospital be provided for diphtheritic cases, a hospital on a different plan from any which we have here, where a child can be sent with its mother to go as nurse, and still have the child under the supervision of the hospital authorities. Of course it would require a large number of rooms, and each patient should have a room to itself. In this way it might be possible to stamp out diphtheria.

Dr. Tuholske related the following case: A gentleman had come from Wichita bringing with him his wife and four children, the object of his visit being to have treated a child which has a club foot. He sent word in the morning for the doctor to come to the hotel to see them and to make an early call, because one of the children, which had just been brought along in order that it might not be away from its mother, had gotten sick. However, it was six o'clock in the afternoon when Dr. T. reached the hotel, and he found that the little fellow had scarlet fever. These people were at Moser's hotel, and he told them that it would be necessary to notify the proprietor of the hotel, and report the case to the health authorities at once. The gentleman hardly knew

what to do, and, there being no hospital in the city to which his child could be sent, the doctor suggested that he would look around and see if he could not engage a furnished room somewhere. He did call at several places where he saw signs advertising furnished rooms, but they all refused to have anything to do with the patient, because they said it would be impossible for them to rent their rooms for a long time to come. So this gentleman said that he would pack up and return to Wichita at once. Now, of course, this was not a very desirable thing to do, so far as the public was concerned. Dr. T. said to him, "you will take a patient into a car where there may be other children." But he said, "What am I to do? They won't let me stay in the hotel, and nobody will rent me rooms, and there is no hospital to which the child can go; I can't stay in the street." And so he did pack up and returned to Wichita.

Dr. Dean said that at the city hospital there was no place to put patients with erysipelas. So they took one of the outbuildings and fixed it up as comfortably as possible and placed the patients there. Occasionally there would be a case of suspected small pox sent to the hospital, and as they had no place to put the patient, they took an old shed that had been built up against the ice house and placed the patient there. Still a difficulty arose when sometimes there were two patients of opposite sexes, and there was no provision whatever then. The same thing may be said with reference to diphtheria cases. And so the ambulance that was used to convey the patients to quarantine was kept in the same shed with the other ambulances.

VACCINATION.

Dr. Hardaway said: While it is quite true that the city authorities and the public are frequently at fault in these matters, it is simply a truism to say that prevention is better than cure, and that the medical profession is largely at fault for the spread of small-pox. We can prevent the recurrence of this disease by vaccination. The majority of medical men do not pay sufficient attention to vaccination. It is looked upon as a very trivial matter; anybody may do it, and it is often imperfectly done, so that it gives little or no protection. The surface is too imperfectly scarified, and too little pains is taken to secure that the virus is thoroughly softened and dissolved when bovine virus is used. There are probably not ten medical colleges in the country where a single lecture is given on the subject of vaccination. Moreover the pub-

lic very little appreciates the importance of vaccination, simply because the profession so little appreciates it that the fee is ridiculously small. This also causes medical men to look upon it as a very trivial matter. How often is a patient seen a second time? The English physician requires the patient to return about the eighth day. But as a general thing the patient is not requested to return by physicians in this country.

Dr. Nelson said two years ago during the first epidemic of diphtheria, a hospital was established on Papin street especially for diphtheria cases, and whenever a case was found the inspector immediately went to the house, and if he found that there were no proper facilities for isolating the case in the house, the opportunity was given for the child to be taken to the hospital with its mother and be cared for without any expense to the parents at all. There is no provision now made for any contagious disease except small-pox. The arrangements at quarantine hospital have been such that patients taken there have been quite delighted with the treatment they received, and expressed themselves as preferring to go there to being treated anywhere else. Of course a great many people who reside in private houses and boarding houses in the city would not be permitted to remain, as everybody else would leave the house. In every large city provision ought to be made for these contagious diseases, so as to protect the public. Unless this is done, people will continue to travel in public conveyances and thus expose the public.

Dr. Grindon called attention to the tables given by Marsden, in which he shows the susceptibility to small pox and the percentages of recovery after infection, in those who had never been vaccinated, in those who have been vaccinated once, in those who have two, three, four or more scars. In the observation of four hundred cases by himself the result conformed to that obtained by Marsden in his much larger number. The highest mortality, of course, was amongst those who had never been vaccinated, the lowest amongst those who had four or more scars. *Dr. Grindon* thinks that any physician who vaccinates a child and fails to put on four good scratches does not perform his whole duty.

Dr. Eversole asked if it is not better to make one good scarification, and after that gets well try it again, and, if it shows some indication that there is susceptibility, try it again and even a fourth time, instead of making four places all at once. He inclined to prefer that. In his own person it had taken three times.

Dr. Grindon thinks it is not so well to vaccinate at different times as to get two, three, or four scars at once, because secondary vaccination never takes so well as primary vaccination. Two scratches makes a very sore arm sometimes, but there are two arms and two legs, and you can put on four scars on different limbs if you like? By putting the scar on the outside of the leg, it is out of the way and the child can be picked up and carried about without any danger of injuring it.

Dr. Hardaway said it is certainly true that two or more successive vaccinations do not give the protection that is given by four or five which are made at the same time. *Marsden's* statistics, however, refer to punctures. Fluid lymph was put in a puncture on the arm; consequently there were four or five or six marks. Nowadays when we make scratches, it is unnecessary to make four or five scratches. Then too it is not necessary to make such a large spot.

HEARING WITHOUT THE COCHLEA.

Dr. Barclay referred to the discussion of *Dr. Jones'* paper on Syphilis of the Ear, when he reported a case which had been given to him by *Dr. Samuel Sexton* of New York, in which the hearing was retained after exfoliation of the cochlea. There was some apparent question as to the veracity of this statement, from the fact that he was asked whether he had seen the case (*vid. May COURIER* p. 472) to which he answered that he had not. He thought it his duty to the gentlemen present and to the subject, to write and ask *Dr. Sexton* regarding the matter. The gentlemen in discussing the subject took a decided stand against the credibility of the reported cases. He would now state that there are five or six cases reported by *Guye*, *Cassells*, *Christemuck*, *Jacobson*, *Gruber* and, he thought *Betzold*. These cases were reported previous to that of *Dr. Sexton*, who writes saying, "I have seen several cases where exfoliation of the cochlea has not been attended with total loss of hearing. I fancy no one disputes that in one of my cases marked hearing remains." Now this gentleman and the other five or six referred to are skilled diagnosticians, and would undoubtedly have made every effort to differentiate this from hearing in the other ear.

Stated meeting, April 17, 1888, DR. HERMAN in the chair.

ERYTHEMA.

Dr. Grindon related several cases of erythema. A young man presented himself at his dermatological clinic having his body covered with a most abundant and copious eruption of a bright red arterial hue, the face being the part least involved. His neck, chest, arms, thighs, feet, hands and legs were covered with what looked, at first sight, like a very profuse eruption of measles, though of a little brighter color than measles; particularly confluent on the lower part of the forearms, and also on the thighs. There was some redness of the fauces; and at one point on the thigh and at another point on the back there were great patches which were raised, much like large wheals of urticaria. In the centre of the wheal there was a depression, and there was an exudation of blood between the epidermis and the cutis vera, a black hemorrhagic spot, not an ecchymosis into the skin, but very much such an appearance as is seen in hemorrhagic small-pox. This patient didn't feel very badly, but had felt badly. The eruption had first appeared a little over 48 hours before; since then he had felt much better. Before the eruption appeared he had been quite sick, had had fever, occipital headache, backache situated low down, and vomiting. His temperature when Dr. G. saw him, was 99°; in the afternoon of the same day it was 100°. In hemorrhagic small-pox after the eruption appears, the temperature often decreases, so that the doctor was in doubt as to whether the man might have small-pox. The man had taken copaiba. The rash of copaiba is very profuse, of a bright red, and there are wheals like urticaria. But he had never heard of hemorrhagic copaiba rash. Altogether he thought the chances were that the man had small-pox; and if so, probably he would die. He was living in a boarding house where there were a good many other people, who were panic stricken in apprehension that he had small-pox. So he advised to remove the man to quarantine and watch him. This was done, but it proved not to be a case of small-pox, and he had returned to town. The rash had now entirely disappeared, and he was quite well. Dr. Grindon concluded that it was a case of erythema from copaiba. Another patient was a little Italian girl about 10 years old seen in consultation. She was taken sick two weeks ago, and soon devel-

oped pneumonia. Five days ago an eruption appeared, which to-day had disappeared to a large extent. There was still to be seen a certain lividity about the back, chest and abdomen. On the face there was plainly seen a roseola which was faded, however, in patches the size of a 25 or 50 cent piece, running together and forming various figures, with patches of sound skin between. On the forearm, hips and legs was to be seen a similar eruption, also fading. These patches looked more like measles after the individual lesions have run pretty much together. You could make out in certain places the distinct concentric curve; but this was the fifth day of the eruption, and measles would hardly look so distinct on the fifth day as these patches did. Then there was no history of anything like measles and very slight fever. The patient was in a sort of typhoid condition from the first. She has been sick just two weeks to-day. The doctor said that there had been some slight fever, when the temperature had been between 101° and 102° , and just before the appearance of the eruption it had arisen to 103° . Here was a case in which there was a catarrh of the respiratory tract. There was considerable bronchitis and pneumonia accompanied later by this eruption. Roetheln would not stay out so long; it would not stay out more than three days. The books which speak of symptomatic erythemas attribute them to the use of certain drugs, to gastro-intestinal derangement, vaccination and a variety of causes; but none speak of erythema as symptomatic of catarrh of the respiratory tract. Of course there was gastro-intestinal derangement here, and it might be, and probably was, the cause of the rash. He had been told recently by a gentleman practising in a section where there had been a great deal of bronchitis, pneumonia, etc., within the last two or three weeks, which this gentleman thinks is due to some miasma in the air, that in a certain proportion of these cases these erythemas appear, as also other skin irritations. The third case occurred in a family where four children have diphtheria and are doing well. One little fellow, however, about three years old, broke out on Thursday morning with erythema all over his body, much like German measles. The patches are about the size of a finger nail and of a very light pink color, except some places which are becoming brownish. The condition of the child is otherwise good. A. B. Robinson speaks of this erythema diphtheriticum as coming on early, during the first two or three days. Dr. Grindon believes

erythema as a symptom of diphtheria to be rare. It is mentioned by J. Lewis Smith, by the writer in the Reference Hand Book of Medical Science, and also by the author of the article on diphtheria in Quain's Dictionary of Medicine.

Dr. Leete said he had never seen a case with a hemorrhagic eruption completely covering the surface of the body due to the patient taking too much copaiba but he did happen to see two cases at the same time when in the army, which he was fortunate enough to save from being sent to the small-pox hospital, which would have been equivalent to condemning the patients to death, so poisonous was the air which the patients were compelled to breathe. The face and hands and neck of these patients were covered with an abundant eruption, but a little inquiry developed the fact that both of these patients were suffering with gonorrhea and had been plentifully supplied with copaiba, which they had taken liberally in the hope of getting rid of their trouble sooner. But in these cases there was no element of hemorrhagic infiltration present. If that element were added one might easily be misled. The eating of strawberries in some people causes an eruption, or the eating of the yolk of an egg; while in the majority of people they do not have such an effect. Of course we are obliged to conclude that it is owing primarily to some disturbance of the stomach and the alimentary tract, but just how it all comes about, and why it comes about so speedily, would be very interesting to make out, if it were possible. In some cases the patient is made sick very quickly, and the eruption is one of the first things observed after the stomach disturbance develops.

Dr. Wolfner in connection with the subject of copaiba poisoning related a case of erythema caused by quinine, a number of years ago in the Saginaw River bottom in Illinois. This is a malarious district. One young man, about fifteen or sixteen years old, who every spring when the river began to rise and the bottoms got moist, would shake, told *Dr. Wolfner*, that he would be seized by a chill and suddenly an eruption would appear on his body which looked very much like erythema.

Dr. Wolfner saw him in one of these attacks, and his body from head to foot was covered with an erythematous eruption, and after it had lasted for a day or so, the epidermis would peel off, not in small pieces, but in large flakes. The skin of the palm of the hand would come off almost in one piece. When he felt the attack coming on, if he took quinine, the eruption took place over his body. By

omitting the use of quinine it was discovered that he had no eruption; so that it was assumed that the quinine caused the eruption. As soon as the cause of the eruption was discovered he took salicine with as good effect, and has had no return of the erythema.

Dr. Grindon said if there had not been the hemorrhagic element present in his first case it is probable there would not have been any difficulty in differentiating between copaiba poisoning and small pox. One thing which he thinks quite instructive was the fact that there were the prodromata of small-pox, pain in the small of the back particularly, doubtless due to large doses of copaiba which affected the kidneys.

As a rule with drug eruptions there is a certain kind of eruption for each drug. But sometimes the same drug will cause one eruption in one person and another in another, although some of them are pretty constant. The eruption due to taking iodide, is generally pustular, but sometimes it is bullous; so with bromide of potassium and also with quinine. Sometimes it is an erythema, sometimes an urticaria, and this tendency to be affected by certain drugs seems to run in families. He knows a family where this idiosyncrasy in regard to quinine affects all the family. Quinine invariably brings out a nettle rash, and, strange to say, in one subject the urticaria is always located in the same place, behind the ear and not elsewhere.

Dr. Herman had heard that in quinine factories the mechanical irritating power of quinine appears to be very objectionable, producing an erythematous condition of the skin about the parts exposed.

He also reported a case similar to *Dr. Grindon's*. Several years ago while attending some cases of diphtheria in the part of the town in which he then lived he saw a case similar to that which *Dr. Grindon* had reported. There were four children in the family sick with diphtheria. One of them was very sick indeed and came near dying. One of the others, a few days after the development of the diphtheria, developed an erythematous rash similar to scarlatina; but the other symptoms of scarlatina being absent, he took it to be a diphtheritic rash.

MICHIGAN STATE MEDICAL SOCIETY.

The twenty-third annual meeting of this Association was held in Detroit June 14 and 15, 1888, Dr. Theo. A. McGraw presiding.

After an address of welcome, the first morning, by the mayor of the city and the usual preliminary routine business, and some matters of merely local and transient interest, memorials were read of the members deceased during the year, viz., Dr. D. A. Joy, of Marshall, and Drs. A. B. Palmer and E. S. Dunster, of the State University.

Dr. George Duffield, Secretary of the society, submitted his report, which commenced with a comparison of the status of the society at the last meeting held in Detroit (nine years ago) and at present. At the former meeting there was a membership of 168, of whom only seventy five were present at the meeting, while now the membership is 275, of whom a very large proportion will be present; still the membership is small compared with the number of practitioners in the state, and earnest efforts have been made and are still making to induce members of the local societies to unite with the state organization. The difficulties connected with the publication of the transactions and the compliments which were received when they were finally completed and distributed were detailed. The report went into particulars relating to the condition of the society, of interest only to the members, and impossible of condensation. The report concluded with a statement that the duties of treasurer had to a certain extent fallen to him and that the receipts having been for the year \$251 and the disbursements \$248.52, the balance on hand was \$4.48.

The Committee on Admissions, reported favorably the names of twenty-five applicants for membership, and all were then elected.

A proposed amendment to the constitution, offered at a previous meeting, making all active members of the association removing from its jurisdiction eligible to corresponding membership, was put upon its passage and unanimously adopted.

Dr. H. B. Hemenway, Treasurer, reported as his gross receipts \$940.76 and disbursements \$348.32, leaving a balance of \$71.94, but as \$100 has been voted and not paid to the "Rush Memorial Fund" there is an actual deficit of \$28.06.

An amendment to the by-laws was adopted, fixing the annual dues at \$2 and providing for suspension of delinquents.

A nominating committee was then appointed.

Dr. Wade then spoke in behalf of less work and more social enjoyment at society meetings.

The morning session then closed. The afternoon hours were given to the section meetings, which were well attended, and in which a large number of papers were read.

In the evening President McGraw delivered the annual address in which he compared the medical education of students in England, Germany and our own country. He said: "We are too much occupied with our own influence on people to pay sufficient attention to the influence of people on ourselves." American medical and surgical schools are not put in a state of efficiency satisfactory to medical men.

The responsibility for their low standard and the lack of equipment in hospitals should be assumed as much by the people as by the medical profession. He denounced the custom of permitting students to begin study in private offices under preceptors who seldom pay any attention to their needs and less to their fitness to practice. The excellence of the German schools was universally admitted, but the American system of training and education, though comparatively in its youth, produces in time results of which the profession and people may be proud. The American schools make their instruction eminently practical.

Dr. George K. Johnson, of Grand Rapids, followed with the annual address on the practice of medicine, his subject being "The Natural History of Disease the Basis of Rational and Scientific Practice."

He set forth that the vast majority of diseases end in a return to health of those afflicted; that most sick people will get well when left to the curative powers of nature. He held that drug medication was too excessive and indiscriminate; that with few exceptions, the knowledge of drug action did not warrant prodigality in usage. The present drift was in the direction of conservatism in the use of drugs, although there was a constant flood of therapeutic novelties. The only course for the true physician was to take the law from science only.

Dr. Flora Ruch, of Ypsilanti, read a poetic tribute to the late Dr. E. S. Dunster, of Ann Arbor.

The closing feature of the programme was the annual address on surgery by Dr. Geo. E. Frothingham, of Ann Arbor, his subject being "Surgery as an Art and a Science."

The address was historical in character, showing the progress from the earliest days to the present time.

At the close of these exercises a reception was given to the members by Dr. T. A. McGraw.

At the second day's session twenty six additional names were reported for membership, and were elected. Several telegrams were read.

The report of the nominating committee was adopted, thus electing the following officers for the ensuing year: Vice-Presidents, Drs. Charles N. Lewis, Jackson; E. B. Ward, Laingsburg; Simeon Belknap, Niles; Secretary, Dr. Geo. Duffield, Detroit; Treasurer, Dr. H. B. Hemenway, Kalamazoo; Judicial Council, Drs. Wm. Brodie, Detroit; F. K. Owun, Ypsilanti, and J. H. Bennett, Coldwater.

Delegates were also appointed to the British Medical Association, to the Medical Association of Ontario and to the American Medical Association.

It was also voted to hold the next meeting at Kalamazoo on the second Tuesday in May, 1889.

Drs. S. S. French, of Battle Creek, Horace Tupper, of Bay City, Geo. E. Frothingham, of Ann Arbor, and C. J. Lundy, of Detroit, were nominated for the office of president, but the last three declined to be candidates against Dr. French, who was then unanimously elected. Having been conducted to the chair by a committee consisting of Drs. Frothingham and Lundy he returned thanks for the honor conferred, but excused himself from making a speech by reason of having but just recovered from a severe attack of pneumonia.

The report of the Finance Committee approving the accounts of the Secretary and Treasurer was adopted.

Dr. E. B. Ward, of Laingsburg, submitted the following:

*Whereas, It pleased creative power
To fill with spores the ambient air,
And people every summer shower
With myriad microbes fresh and rare,
And cause each stream and lake and rill
With living forms its banks to swell
And with bacterian hosts to fill
Each fountain, cistern, pond and well—
And, Whereas, Men of latter years,
Like some who are, and are to come,*

Have filled the public mind with fears
About the wild bacterium
Till timid people fear to drink,
And men of science air their lore
On food, for possibly they think
It may contain a horrid spore—

And, Whereas, Antisepsis seems
Uncertain still beneath the knife,
And fails to meet its author's dreams
In spinning out the thread of life.
While country doctors void of grace
Come to the front with brazen stare,
And bring their patients' case on case
And fain with Lister would compare.

And, Whereas, Each succeeding year
Brings out a crop of new-made men
With ideas fresh and crisp and clear
On subjects dim to older ken,
And which to them as years roll on
Will fade, and more translucent grow
As practice throws its light upon
Its theories of long ago.

And, Whereas, This desuetude
Is liable our ranks to thin
And form a indus whence a brood
Of foul dissensions may creep in
To mar our happiness and peace
And make the saying go more free
That we are creatures of caprice
And therefore never can agree—

Therefore, Resolved, Right now and here
With firm reliance on ourselves;
Without vain hope or cringing fear
Of books which lie on dusty shelves
Or taunts of gibing tongues around,
So far as we can know or see
That Listerism has been found
Not all that it's cracked up to be.

The reading of the preamble and resolution was greeted with enthusiastic applause, but the motion of an unappreciative member of the society to lay the whole matter on the table prevailed by a "large majority."

It was voted that each section shall annually elect one of its

members to read a paper before the entire society on some topic connected with his or her department.

A vote of thanks was passed and an honorarium of \$100, to be increased to double that amount if collections should warrant, was ordered to be presented to the Secretary for services done for the society.

Several papers were then read and referred to the Publication committee.

In the afternoon short sessions of the sections were held all adjourning at 4 o'clock to take part in an excursion provided for members of the association as the closing and crowning event of the meeting.

FIVE AND SIX LIVING GENERATIONS.—DR. WALTER CHANNING gives the following record of a family in which there were, April 23, five living generations, the ages being as follows:

Great great grand mother	-	-	81 years.
Great grand mother	-	-	63 "
Grand mother	-	-	42 "
Mother	-	-	20 "
Child	-	-	5 months.

Dr. B. B. Root records one still more remarkable in which there are living six generations with ages as follows:

Great great great grand mother	95 years.
Great great grand mother	- 74 "
Great grand father	- 59 " 8 months.
Grand father	- 39 " 4 "
Mother	- 16 " 2 "
Child	- 11 "

Bost. Med. and Surg. Jour. April 19 and 26, 1888.

ANTIFEBRIN OR ACETANILIDE.—This agent was discovered by Gerhardt in 1853, being the product of a reaction between aniline and acetic acid. Recently it has been found to have antipyretic and analgesic properties and under the name antifebrin has been extensively used since the first favorable reports by Prof. Kussmaul, of Strassburg. The name antifebrin is copyrighted, and the article under that name is sold for about twice the price which it commands under the name acetanilid.—*Ephemeris*, June, 1888.

NOTES AND ITEMS.

THE STATE MEDICAL SOCIETY OF ARKANSAS at its thirteenth annual meeting, held at Fort Smith, last April, adopted the following resolutions which have the true ring and should be followed up by similar action in other societies:

Resolved, That the members of the State Medical Society of Arkansas have for years observed with pain and mortification the patronage given to charlatanism in all its multifarious aspects by the religious press of our country.

Resolved, further and more specifically, That the appearance in religious papers, ostensibly published for the inculcation of truth and morality, of serious homilies on prayer and praise side by side with cures for consumption, cancer, Bright's disease and other incurable ailments to which an editorial endorsement is often given, as well as secret preparations under the cloak of remedies for disease, but really intended for purposes of feticide and other immoral uses, largely tends to shake the confidence of the profession of medicine in the integrity and purpose of the managers and editors of such journals.

Resolved, further, That it has been the well-known custom of the profession to render services gratuitously to clergymen, which we do not regret nor do we propose to recall, yet we must assert that the frequent occurrence of endorsements and recommendations by the clergy of peripatetic doctors and advertising charlatans has in many instances been the only reward of our gratuitous services.

Resolved, further, That we are aware that the editors of religious newspapers admit the painful situation in which these advertisements place them, and attempt to excuse themselves by saying that it is necessary to take these advertisements in order to obtain means to conduct their papers; but in the language of orthodox theology we would say: "Put behind you that damnable doctrine that we must do evil that good may come."

Resolved, further, That, as a Society, we declare that the con-

tinued perpetration of the above offenses by some of the clergy and religious press brings harm to the bodies of their constituency, and damages materially their influence upon the thinking class of the medical profession.

Resolved, That the Secretary be instructed to furnish copies of these resolutions to the religious and medical press of the United States, to the American Medical Association and to the state medical societies, soliciting their co-operation in bringing about a correction of these grievous and palpable errors.

COCAINE AS AN INTOXICANT.—Dr. Opheus Everts, superintendent of Cincinnati Sanitarium, writes in his annual report that further observation confirms his previously expressed opinion that it is a fascinating and dangerous drug, a demand for the habitual use of which may be readily established by persons of unstable, or neurotic constitutional proclivities; such, for example, as have or are liable to become confirmed drunkards, or opium eaters. As in the matter of insanity not every one, not more than one of several hundred, perhaps, is liable to become insane, however subjected to circumstances sufficient to account for the appearance of insanity in the unfortunate one; because of constitutional peculiarities, so in the matter of acquiring and confirming the cocaine, opium, or alcohol habit—only such persons as have inherited, or acquired, a certain organic potentiality are likely to become victims to such habit. The fact, therefore, if it be a fact as stated, that the same distinguished New York physician referred to in last year's report as denying the practicability of acquiring a cocaine habit, has applied a strong solution of cocaine to the lining membrane of his nose, swallowing so much as passed beyond into his throat, daily, for several months in succession, without disqualifying him for his professional duties at any time, or establishing a demand for the drug, does not disprove nor discredit the fact of its potency as a fascinating and dangerous intoxicant. It proves only the astonishing invulnerability of the distinguished gentleman's nervous system, and the capability of resisting untoward influences enjoyed by some rarely endowed persons. Occasionally a man is seen who has, or claims to have drunk whisky all his life-time—although seventy, eighty, or ninety years old,—who is not and never has been "a drunkard" in the ordinary acceptance of the term.

[We remember a thrilling period in one of John B. Gough's lec-

tures, bearing on this as a matter of his own personal experience. He said: "Some men can drink moderately. My own father drank his pint of ale every night until he died an old man and never was intoxicated. He could drink moderately. But my father's son can no more drink moderately than you can blow up a powder magazine moderately."

JOSEPH AUB, M. D., died suddenly in Cincinnati, May last at the age of 43 years. He was born and educated in Cincinnati, graduating in 1866 at the Medical College of Ohio. He then went abroad and pursued a course of special study in ophthalmology in Vienna, London and Berlin, and on returning to New York City acted for some time as assistant to Dr. H. Knapp, of that city. In 1871 having returned to his native city, he was appointed one of the staff of the Cincinnati Hospital, which position he filled to the time of his death. It was my privilege to serve under Dr. Aub during a part of my term as a resident in the Cincinnati Hospital, and I take pleasure in recalling the uniformly courteous treatment by Dr. Aub of all with whom he had anything to do, and the skill in treatment of the cases which came under his care.

His practice increased rapidly, and fully engrossed his time and overtaxed his strength. He improved to the full the excellent opportunity for study which he had at home and abroad, and had won a most enviable position in the profession. For five years he was professor of ophthalmology in the Cincinnati Medical College.

An attack of acute rheumatism a few years ago left him with a chronic heart trouble, and within the last few months albuminuria developed, the complication terminating fatally as noted above.

CORRECTION.

ST. LOUIS, May 21, 1888.

EDITOR COURIER.—In the report of the transactions of the St. Louis Obstetrical and Gynecological Society in your April issue I find that a mistake has unintentionally been made by me, regarding the length of time the case (cancer of the uterus) was under the care of Dr. B. M. Hypes, of this city. Allow me to say that his knowledge of the case was only "two or three" *days* instead of *weeks*, when he asked me to see the patient with him.

The error does an injustice to his well-known care and ability as a physician, and I take this means of putting the record in correct form.

Respectfully submitted, GEO. F. HULBERT.

ST. LOUIS COURIER OF MEDICINE.

VOL. XX.

SEPTEMBER, 1888.

No. 3.

ORIGINAL ARTICLES.

ELECTRICITY *vs.* TAIT, OR THE USE OF ELECTRICITY IN INFLAMMATION AS FOUND IN GYNECOLOGY.

BY GEO. T. HULBERT, M. D., *late Superintendent Female Hospital,
St. Louis.*

[*Read in abstract before the St. Louis Obstetrical and Gynecological Society,
June 21, 1888.*]

THE era in progress, which the work of Lawson Tait has marked in gynecology cannot but be a source of pleasure and satisfaction to the fair and just minded, and the inestimable benefits that have accrued to suffering woman are not to be gainsaid.

It is not with any purpose to criticize Tait or Tait's work, for of him and his work I have a profound admiration and approval, and trust that he may be spared many years to the profession and to the work before him, that I speak at this time. But my purpose is to present to this society a few thoughts on diseases of the uterine appendages, and to place on record work done possibly within the field of conservatism, when compared with the more radical methods of Tait, but work done with the same object in view, namely, the recovery of the health of the patient. I furthermore desire to enter an emphatic protest, and this is

he more especial purpose, against the reckless, unnecessary, criminal fashion of removing the uterine appendages from every woman who complains of those distressing and persistent symptoms which show she has disease connected with these organs. I say criminal, for the reason that it is unnecessary, and the example set by those who do so, possibly with uniformly good results, to the less experienced or inexperienced leads to disaster and sacrifice of life. It is very evident from the "signs of the times," and "he who runs can read" that the conservatives are about to have their influence felt, and that operation from which so much good has come in the hands of Lawson Tait, and so much death in the hands of the imitator and tyro, will find its proper scope and application. Instead of being *the thing* to do for our patient, it will be the *only* thing to do. This is no new idea but has from the first and at all times been repeatedly insisted upon by Mr. Tait.

In my estimate of Mr. Tait and his work, if I read aright, it is evident that at no time has he sacrificed his consciousness of right for the purposn of operating. His early work was absolutely confined to that desperate class of cases for which nothing but ineffective palliation had been possible. With enlarged experience and brilliant success, the field was enlarged so that to-day it seems possible for *Mr. Tait* to do almost any operation in the abdominal cavity with almost no risk of life and almost perfect results. To Mr. Tait are we indebted for a mass of knowledge relating to the pathological conditions in diseases of the uterine appendages which makes it now possible to make the attempt, and see if in these distressing troubles there are no other effective means that may be employed to accomplish as good or like results, and avoid the ever present, fatal danger, and it is a mere assumption to conclude otherwise, of operations in the abdominal cavity for salpingitis, etc.

Our experience with the use of electricity in the treatment of diseases of the uterine appendages has emboldened us to place on record an attempt in this direction of conservatism in which the results have so far been satisfactory. The use of electricity in this class of cases has extended over a period of three years,

and among a class of patients in which these conditions are frequently found.

The cases selected have been as follows: ovaritis, salpingitis, hydro-salpinx, pyo-salpinx, pelvic peritonitis, acute and chronic.

In naming these conditions I do not wish it understood that they have occurred as distinctive or separate conditions, but that either one, two or all have been present, and with the exception of the first class, they have most generally been complicated cases.

I am fully aware of the fact that the question of diagnosis can be raised against me, and am free to say that outside of the history and clinical picture and my examination of the patients, I have nothing to offer, no diseased tubes or ovaries, etc., because my patients surreptitiously carried them away, and I shall not be able to show them to the gentlemen present.

En passant, I wish to make another observation, and that is this: In presenting the claims for recognition regarding the use of electricity, I do not wish it understood that all my patients have recovered "without a bad symptom," for such is not the case. I have had a very rich experience in the use of this remedy, powerful for good or bad, and my patients have at times suffered as a result of my ignorance or carelessness, but fortunately I have not as yet recorded a death, and have had some cases, a considerable number, which did not seem able to receive the application of the remedy. We must conclude, therefore, that electricity properly used will not relieve all cases, so that our chances as laparotomists must still be assumed. But thus I do say, that laparotomy in any case in which the uterine appendages are diseased, should not be done until electricity has had a fair and intelligent trial. This being done the necessity for Tait's operation will be positively and decidedly limited. Electricity when properly understood will stand in the same position toward these conditions as it does toward fibroid tumors of the uterus, with this advantage, that the recovery will be more frequent and perfect.

From our knowledge of diseases of the uterine appendages which we are considering, it is plain that the causative factor finds expression in that condition which we term inflammation;

that inflammation and its results in this locality is the enemy to be overcome. If we can subdue the inflammation, remove the results of that inflammation and abolish the causative factor, our problem is solved.

In studying the etiology of diseases of the uterine appendages it is apparent from the testimony presented that the hosts of mycology are considered as the *fons et origo* of most of this inflammation, and that the gonococcus and bacteria of sepsis are the virulent agents at work. Traumatism, cold, etc., as heretofore understood, are not of such import.

Be these questions determined as they may, it matters not for our purpose which they are: it only serves to establish the base of operations, so to speak, or gives the key to proper and rational therapeutical measures. It establishes a principle in gynecology. This principle is as follows: Given a perfect set of uterine appendages, maintained in perfect order in a perfect organism, or woman, and all the hosts of mycology and temperature must fall and perish in their attack. The natural normal organism in nature knows no disease; it is only when violation of established law and order steps in that disease prevails.

That this natural, normal, perfect organism does not exist is only too well known, and my purpose in bringing forward this line of thought is to emphasize and punctuate the fundamental principle in the method of treatment we are advocating, without a full recognition and application of which disappointment and disaster must follow.

In the use of electricity men have run wild and vied with each other as to which should make the most noise, startle the largest number in the medical world, report the most brilliant results, etc. This is not the work by which we wish to be directed. These startling, brilliant results are hard to understand by the finite mind; they are mysterious, they are vicious, and the less we strive after such results the better. Let every man work so that his results are in accordance with the known possibilities in things natural, and with a positive determination of doing that which he desires in a natural way, and he will be encouraged by caution, patience and success. Hence we conclude that our application of electricity must be so regulated that ev-

ery indication possible in nature be met. Having conceded the fact that a perfect organism is not what we are called upon to deal with, but an imperfect one of all grades, from fair to absolutely bad, and accepting the fundamental doctrine of mycology namely, that a *soil* must exist for the life and development of its numerous and varied hosts, we are better prepared to understand the rationale of diseases affecting the uterine appendages and their treatment by electricity. We are also led to conclude from the foregoing that in dealing with these conditions, we are dealing with that complex phenomenon termed nutrition or processes of growth and repair. Nutrition not being a single entity but a complex phenomenon in which all parts of the organism are more or less concerned, the Creator has placed in woman a connecting link or system, through and by which this process or phenomenon of which we speak is accomplished. I refer to the nervous system, and especially to the sympathetic. Diseases of the uterine appendages or any diseases of the genitalia in women in my estimation are no more local diseases than is tuberculosis.

I cannot accept the opinion that because the gonococcus finds lodgment in a Fallopian tube and the result is a salpingitis, that therefore the salpingitis is due to the gonococcus, and that alone, any more than I can accept the doctrine that because the bacillus of tuberculosis finds lodgment in the lungs, therefore a phthisis is the result. I am prepared to admit without hesitation that in the microbe we do find the seemingly active and exciting cause; that in the absence of the microbe the active expression of the disease would not have occurred, and that every lodgement of the microbe will cause the trouble, if the conditions are the same, but this is not my conception of the disease. The disease resides back of that, and is a matter which has been developing from the time that law and order in the perfect organism from which it sprung was violated, and in proportion to the violation will be the development of the disease. This conception of disease will place the gynecological mind in a broad gauge and prevent it from seeing in every local condition the sum and substance of its therapeutics. Be it understood by all that in placing myself in this position I do

not ignore and will not see to the uttermost the local condition, for such is not the case, but I consider the local the secondary; the organism, the constitution, the susceptibility, the vulnerability or the woman, the disease.

The rationale of our therapeutics comes from this conception. In the conditions of which we speak, there is always a history many times unwritten, but generally found after search, of violated law and order of things natural, which is sufficient to account for the difference in effect from the same agent, and which also places beyond all reasonable doubt the correctness of my position regarding diseases of women.

It is nothing new to call attention, for example to the varied effects of a gonorrhea in several different patients. In one the local expression is only a urethritis; in another, the same and a vaginitis, in another endometritis is added; in another endometritis and salpingitis are added; another in addition to all of these develops ovaritis or peritonitis; another is affected from the vulva to a pelvic, even to a general, peritonitis, all of these shades have we seen. Does this pathological picture mean that the disease was local and the differences due to the quantity of the dose? No; it means that these different patients were in different states of disease before they received the gonococcus, and that the penalty was in direct proportion to the violation accomplished.

There was a better soil prepared in one than in the other. Time and space will not permit any further extension of this line of thought; and this will suffice to make intelligible the application of electricity in the conditions considered.

Electricity as a therapeutical agent is possessed of powers as yet but fairly understood; increasing experience with it and its application only serves to convince me of this, but also serves to make me more cautious and feel the need of greater knowledge of it. I am far from that delectable state of mind which some seem to occupy, that they know all they desire about it, and have searched the limit of its application.

We know that as a therapeutical means it can be more scientifically and exactly applied, more positively controlled and produce a more profound local or general influence for good or bad than any we have yet used.

We know furthermore that its use in diseases of woman has wrested from the hands of the surgeons many cases that heretofore were legitimately theirs. We know that with it patients get well who heretofore were considered incurable, that comfort, health and ability to maintain their position in society and against poverty and invalidism has been given to many that before were in the depths of suffering and despair.

The most encouraging feature in its use is the renewed vigor and vitality it imparts, and that too, blessed with a permanency not known in the use of other remedies.

The field of usefulness of electricity, as will be seen from the foregoing, is, in the conditions considered in this paper, that which covers more especially the process of repair. I do not wish it understood that by electricity we are going to remove the effete products of the local process, such as pus, blood, etc. To some extent this is possible ; but it is not necessary, and is taxing the patient and remedy more than I wish to advocate. In its use we strive to subdue the local inflammation; promote absorption of hyperplasia and hypertrophy, establish the general health, and produce proper innervation. The effete products, such as pus, blood and serum, we remove by surgical method. Now if all this can be accomplished, and I believe it can, and know that in those cases which have persisted in the treatment it has been done, I fail to see the necessity for the removal of the tubes or ovaries. It may be claimed that we have no assurance that the result will be a permanent one. The answer is that, considering the slight risk to the patient incurred by this method, this objection can have no weight, when there is offered as a substitute a permanent result with the added risk of a laparotomy, or Tait's operation. The slight risk demands a trial of this method before a justification exists for a laparotomy. All we can say is that so far the results have been permanent. There are questions of expediency that might to some compel a resort to a laparotomy.

The method I practised, as may have been inferred from what precedes is not the use of electricity alone. For over a year I gave electricity a fair trial alone in the treatment of inflammatory troubles : and while the results were far better than

by the use of any other single remedy, they are not and cannot from the very nature of things be as uniformly good as when other means are used to assist in the sense of protection from septic influences, and the prevention of accidents, the result of a want of maintaining the benefit accomplished by such application. To make my meaning plain, take for example a simple case of subinvolution of the uterus consequent upon an abortion or delivery at term. Here electricity has, if properly used, a positive effect. The effect is permanent absolutely if the general tone of the patient is sufficiently good to maintain the advantage gained. The repair accomplished is in persistence and rapidity in direct proportion to the general condition. Hence it is that we see patients where one, two or three applications accomplish all that is needed.

When this is the case, we have a patient whose general condition is undoubtedly good, the local difficulty being the only visible deviation from the healthy. But take for instance the same local condition in a debilitated, anemic neurasthenic, and the picture becomes anything but brilliant. While it is true that electricity in this class of patients is a sovereign remedy, it is not true that in all cases it will work effectively and rapidly alone, nor as effectively and rapidly as when securing legitimate assistance. Here the application, while at once possibly but not always, it will produce a decided impression, is not lasting, and in some instances is positively bad.

The explanation is palpable and easy.

The reserve vitality or energy has been by the application in the latter case absolutely consumed, and a reaction comes which the power of the patient cannot resist. The real difficulty here is often not so much in the electricity as in the manner in which it has been dosed. How often do we see this class of patients real heroines in courage and endurance; they are morbidly courageous, and this coupled with fascinating possibilities that they conceive lie in the use of electricity, lead them to tax their power to take a dose which they measure in the expression "All I can stand." This state of affairs, coupled with a spirit of accommodation and impatience to do all possible on the part of the physician, will generally account for the badness of

the result. The moral of all this is, therefore, caution. The dose is comfort and freedom from suffering.

From this extreme state of neurasthenia to the slight deviation from the normal, we find all grades, and the natural result is that in the use of electricity we must meet with many variations in the effects accomplished, so that the time in which the work is done and the quality will vary in proportional degree.

In order, therefore, to obtain a more speedy and effective result, electricity must and should receive assistance directed to the end that the benefit each application gives be maintained.

Hence, in congestions, inflammations and septic conditions we resort to the supporting tampon and antiseptic precautions. In extreme cases we medicate in the direction of promoting and supplying better nutrition, rest and a regular condition of the bowels.

For the purpose of a fuller appreciation of my faith and claim for electricity in the conditions considered in this paper I desire to call attention to the subject of electrolysis, and the position it must occupy in the method adopted and proposed.

The idea prevails to a large extent, that in the use of electricity unless we can obtain a decomposition, destruction, and disappearance of morbid material, through this especial effect (electrolysis) of the galvanic force, we cannot hope much benefit from its use. In fact electrolysis has very largely become electricity. In my conception of the treatment of the inflammatory conditions herein mentioned the electrolytic effects have been left to themselves, so to speak ; other effects have been sought for mainly, and electrolysis has followed in a secondary way.

In allaying irritation, producing better enervation, improving nutrition, accelerating and increasing the power for absorption, excretion, osmosis, etc., electrolysis can not be the governing principle, but must follow to the extent and degree possible under the conditions present. If the desire was to obliterate a fibroid than it should be supreme.

I have many times had patients to treat who were capable of receiving a strong dose of electricity without any special reaction following. In these, when there was any special indication,

such as large inflammatory deposits, or hyperplasia of a large degree, I have worked with the especial object of electrolysis, but such has not been the rule in practice. In my early work, electrolysis being the dominant idea, I soon found that it would not do, but was the cause of much trouble. I conclude, therefore, that electrolysis must take a secondary position and only under especial circumstances can become the governing principle in treatment. In my judgment the cardinal principle to govern in the application should be the more general and complex effects, such as electrotonic and catalytic.

Beyond all reasonable doubt electrotonus is a phenomenon connected with the nervous system. Catalysis is the sum and substance of effects upon nutrition, local as well as general. Evidently here also the nervous system, especially the sympathetic is the great factor.

There is no dispute regarding the influence of the sympathetic in diseases affecting the uterus and appendages, and experience in the application of electricity in these conditions will serve to convince the most sceptical as to this influence and demonstrate the importance of recognizing and taking advantage of it in gynecological therapeutics. To this intimate relationship must we look for the explanation of endometrial development, seen in the presence of fibroids, tubal gestation, and ovarian irritation.

In reverse order may we justly expect to get positive remedial effects in diseases affecting the ovaries, fallopian tubes, pelvic peritoneum etc., in electrical applications to the endometrium.

Having given the more general considerations we now turn to the special.

First. The preparation of the patient for the operation, for we must consider our electrical force, as the knife in our armamentarium, and shall demand for it the same consideration. This consists in regulation of the bowels, insuring rest, and employment of a liberal diet for a few days previous to the first application; in other words, doing for our patient the same things as we would if our operation was with the knife. In doing this with electricity we have an advantage which the knife does not afford, that is, we can use our remedy as a means

in preparation and can with advantage use it for a greater or less period until we get our patient into a much better condition for the radical steps of the method.

Inflammation being, as before remarked, the local expression in our problem, and there being always an area more or less general of congestion, edema, etc., in the preparation, this should be first removed and in the faradic electricity do we find our power, be the inflammation acute, sub-acute or chronic. Ignore, for the time being all organic deposits, accumulations, etc., that may be present. Where there is acute inflammation present there need be no hesitation or fear, but exceeding caution. Here the faradic electricity with the long fine wire, vagino-abdominal, as general as possible, with the positive as the internal or active pole, is indicated.

1. Start from zero and steadily and slowly increase until you have reached the point of tolerance without any pain. Sedation is the goal.

2. Use the large vaginal and abdominal electrodes.

3. Continue the application until the patient of her own accord declares she feels perfectly easy.

4. Repeat the application as soon as there is any return of the original suffering; in short, maintain sedation.

5. If at the first or later complaint is made that the pains are aggravated, stop at once, and see if every thing is as predetermined; if it is found no mistake has been made, change to the bi-polar vaginal form with the same precautions. If this aggravates the pain, abandon the use of the remedy.

6. Continue the treatment until the pain and tenderness have been removed, and we can, by examination, determine that the congestion, edema and active processes have been controlled. Where these complications do not exist, only a few days preparation is necessary, simply for improving the local and general tone.

Where inflammation is not active but we have only the results, and passive congestion is present, we can use the thick, short wire coil for its more prominent mechanical effects. This preparation is, as a rule, applicable to all the varied complicated conditions found in the class of cases we are considering.

Having accomplished the above we are prepared to operate, so to speak. We will take for better understanding and illustration a prepared case of pyo-salpinx. Conditions present, general pelvic adhesions, uterus firmly fixed, sausage-shaped tumor of left side, extending from cornua, outwards, downwards and inwards to Douglas' cul-de-sac fluctuating, free muco-purulent leucorrhea from cavity of uterus, ovary not found, right side adhesions not so extensive, ovary found.

One of two things can now be done; at once empty the tube or let it alone for a time. I have tried both ways, and prefer the latter. If there was any evidence of periodical leakage into the peritoneal cavity I should empty it before proceeding. This accident I believe to be the rare exception, consequently it will be rarely necessary to at once empty the tube.

We now operate by resorting to positive galvanocaustic applications to the endometrium, being controlled not by the leucorrhea but by the fact that we get the anelectrotonic effect with this pole and greater safety, and also that on the disappearance of this phenomenon we insure the presence for a time of catelectrotonic phenomena, and the ultimate stimulant effect is more beneficial because prolonged.

At this point do we find an explanation of many accidents and much disappointment. In the use of the knife we take every precaution to prevent unfavorable reactions. Why do we not the same in the use of electricity? There is a reaction after an application of electricity, and this may occur at once or be delayed for hours or days.

In surgical operations we find increased irritability and shock develop. So do we in using electricity, and in both cases these are manifested through the nervous system. It is the play of force upon force. Now apply the electric force on a weak, debilitated organism, as most of these are, in the conditions we are considering, and it is not strange that the reaction should be often disastrous, (and the wonder is it is not so more frequently) when we fail to take proper precautions. Hence when we use the positive pole as indicated, we should bear in mind what sooner or later follows and take the right advantage of it. We therefore insure support and rest as well as antiseptic conditions

by following the application with the use of the aseptic supporting tampon and quietude of the patient.

This form of application is persisted in until improved nutrition is manifest by cessation of the leucorrhea, absorption of neoplasm and the improved general condition of the patient. Applications repeated every three to seven days. We then change to the negative pole, being guided by the menstrual periods and quantity of the flow. In the more desperate cases we alternate the galvanic operation with general faradization of the sympathetic, accomplished by one electrode in the vagina, usually the positive, and at first, the other electrode over the lumbar region, then at the cervical sympathetic over the anterior triangle and sterno-mastoid muscle. Having removed a greater part or all the surrounding neoplasm, the tube is emptied, carefully and repeatedly washed out by means of the aspirator needle and trocar, introduced through the vaginal wall, with antiseptic solution (sat. sol. boric acid) and the trocar utilized for the electrode. This produces a sinus whose walls are closed to the surrounding tissue by the galvanic cauterization and for a time in the future will act as a drain if any thing is formed in the tube. Negative galvano-caustic applications are then applied to the endometrium, if any neoplasm remains. If not, galvanism only is used through the cotton covered sound or applicator; the tampon and antiseptics following each application until all discharge, pain and evidence of neoplasm is obliterated. As a rule after aspiration we alternate galvanism with faradization of the sympathetic as before described. The utilization of the trocar enables us to complete the entire proceeding without removing it after its first introduction.

In the above case we have had in combination all the conditions practically save ovaritis, peri-ovaritis and hydro-salpinx. For the latter, if necessary, the contents of the tube can be evacuated in the same manner, although I am satisfied that, as a rule, the contents will become absorbed by the time the conditions are such as to allow its evacuation.

In ovarian troubles when there is an accumulation of pus or fluid on the surface of the ovary the aspirator can be used as before. In those cases where the hyperplasia is great and

progress is not manifest, electro-puncture can be resorted to, using the insulated needles by introducing them into the enlarged ovary through the vaginal walls at the most dependent or available point.

In the uncomplicated cases of ovaritis the application of galvanism¹ is more directly made by placing the ball end electrode against the ovary through the vagina or rectum. The pronounced benefits from faradization of the sympathetic, in the manner indicated above, will be best seen in this class of cases.

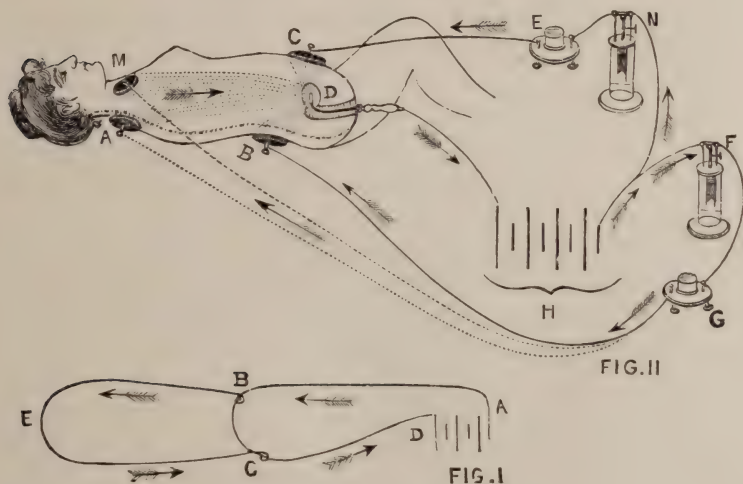
Electro-puncture applied directly to the ovary is rarely called for, and I have only used it in two cases; while formidable in appearance practice did not prove such to be the case, the patients bearing the operation with much less suffering than anticipated, and the reaction, every precaution being used, was limited to an aching throbbing pain, lasting for a few hours. I have no hesitation in admitting that this procedure is an heroic one; the experience is limited and I do not recommend any one to resort to it unless he is experienced in the use of the remedy and has full and complete control over his patient. It should be restricted to that class of patients in which the ovary is adherent and which have resisted all other available methods of applying the remedy; a *derniér ressort* before the knife, using chloroform where fear or sensitiveness on the part of the patient is aggravated, limiting the dose to 30-40 milliampères; in all cases using the positive pole, and not repeating the operation more frequently than once every week to ten days; between séances using local galvanism, and more general faradization of the sympathetic, alternately with the view of continued catalysis and sedation.

Where the element of stubbornness is so pronounced that the ordinary measures for the relief of any or all the conditions herein considered do not effect out object we have a further and still more powerful and general means at our command, and that is general galvanization of the spinal and sympathetic nervous systems.

This can be applied in conjunction and simultaneously with

¹By galvanism we mean galvanic electricity applied with the active pole covered with absorbent cotton or chamois.

the local application by taking advantage of the phenomena and laws of divided currents. An example being the most direct way of illustrating, suppose we take a case of salpingitis, complicated with chronic pelvic peritonitis, which has resisted more than improvement to the degree of relief of the symptoms, symptomatically well but in which there is still left thickened tube and pelvic adhesions. A study of the accompanying illustration will assist in understanding the application.



FIGURES I. and II.

A.B.C.D. the primitive current B. C. points of derivation or division, B. E. D. and B. C. D. derived or partial currents.

H. Battery. N. Water rheostat. E. Milliampèremeter. D. Intra-uterine pole (active). C. Abdominal pole (dispersing) of the primary circuit. K. Point where circuit branches, F. Water rheostat. G. Milliampèremeter, B and A. Lumbar and spinal pole, can be placed over cervical sympathetic as at M. D. Intra-uterine pole. D. point of return to primary circuit. of the derived current.

The manner of proceeding is as follows: The abdominal electrode C being placed in position, the electrode for the less or more general galvanization is put in position. If for lumbar at B, for spinal at A; for general sympathetic at M on both sides

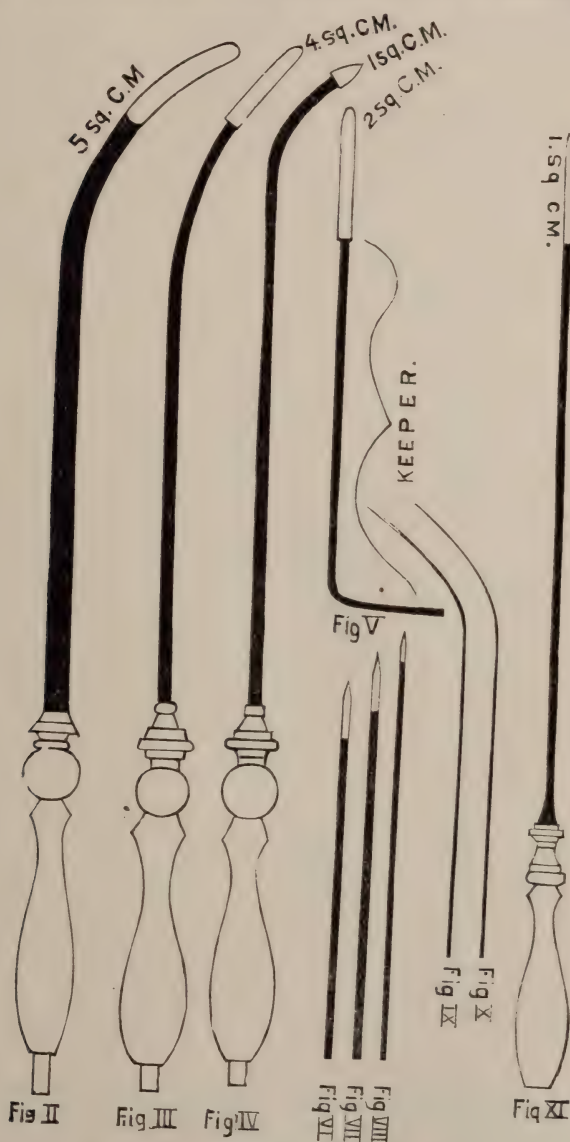
of the neck, simultaneously or alternately. The cervical spinal and sympathetic can be held in position by the patient herself. The active or intravaginal or uterine electrode is now introduced. Both circuits being open by the carbons or connecting rods being out of the water in each rheostat, the primary circuit is first closed, sufficient to give the desired dose, by immersing the carbons in the rheostat N, registering on the milliamperemètre E. This accomplished, the derived current is utilized, by immersing the carbons in the rheostat F, registering on the milliamperemètre G, until the desired dose is obtained. In breaking the circuits the reverse order is followed, first opening the derived circuit; afterward the primary. The dose for the derived current need not be more than from 5 to 15 milliamperes, certainly no more than is comfortable. Séance should last five minutes after the dose for the general galvanization is obtained. With the ordinarily intelligent patient no assistant is needed and no disrobing save loosening the clothing at the neck. In this manner of electrization we have a means brought to bear upon nutrition local and general of such pronounced influence that the result is all that could be desired. By it I have been enabled to carry the class of cases instanced above over the apparent limit of repair; observed thickened tubes and adhesions of long standing disappear which had resisted every means used to overcome them. In that worst form of cases in which neurasthenia was so pronounced that every local application was of questionable value, I have seen the general conditions at once improve, neurasthenia replaced by strength and the patient started on the road to a complete recovery.

In those cases where the neoplasm or hyperplasia is of such extent as to demand more radical means than those above, electropuncture can be resorted to. For the uterus the procedure can be confined to the cervix, the needles being introduced in the line of position of the organ to a depth of from 1 to 5 cm., 1 to 2 cm. usually being sufficient. For neoplasm about the uterus, where the above fails to effect our purpose, the needles can be placed in through the vaginal walls. This is not often necessary, and these punctures should be as much as possible confined to the safety point; in Douglas' cul de sac or the immediate region about the cervix.

Another form of electricity, which has been of great value in the treatment of inflammations found in these cases, is what may be termed the mixed current. My experience with this has been satisfactory. For some time I was unable to understand why I did not get the typical effects from what I supposed was the primary induced current in the coil I had, and why I had so much trouble following the use of the so-called secondary induced current. In the nomenclature to which I had access the primary was considered the short thick wire coil, and I expected mechanical effects. The secondary was considered the long fine wire coil, and from this I expected to get sedation and relief of pain, but such was not the case. The primary acted as should the secondary with the addition of galvano-caustic and electrolytic effects to a degree not possessed by the faradic current. The only explanation I could find was, that the so-called primary was only a galvanic current plus the inductive influence of the individual turns of wire in the coil that carried the galvanic current; that I had in reality a mixed current, galvanic and induced. Fortunately the size of wire used in the construction of the primary coil was of small enough diameter to give inductive effects, which combined with the galvanic produced a very happy result, giving not only sedative but pronounced catalytic effects. I believe this form of electricity is of considerable advantage, and will find its especial application in subacute and chronic inflammations. With this form the positive pole is indicated where anodyne effects are desired with stonger mechanical effects than are found in the fine wire coil, and weaker than with the coarse wire coil; the negative where stimulation, with moderate mechanical effects are desired. In using it we can work in two directions in one, getting stronger inductive influence more especially, by uncovering the iron core; or in the other way leaving the core covered, and increasing our electro-motive force get stronger galvanic effect retaining the original proportional inductive influence. In practice its value and application will be appreciated and found to be something different from the pure galvanic or faradic forms of electricity.

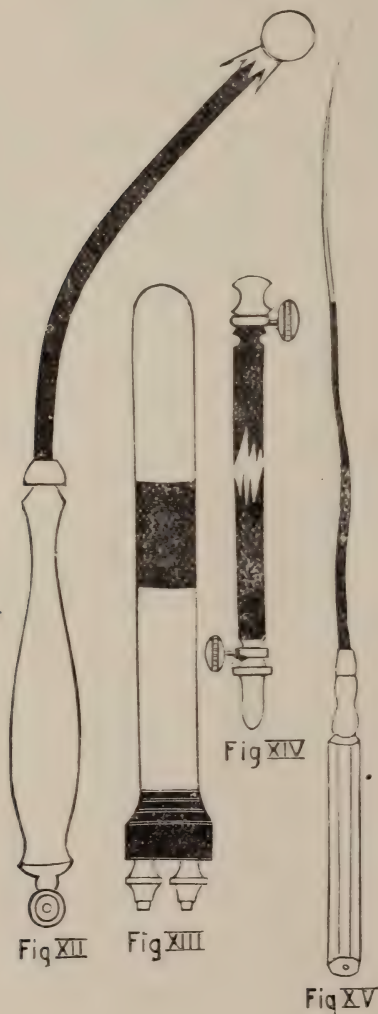
This only serves to make emphatic the oft repeated opinion of Duchenne and Dubois-Raymond that we should know the

and the bipolar, fig. XIII, for faradization. The latter can be used as a unipolar electrode for galvanic or faradic applications.



5. Uterine applicator, platina. for intra-uterine galvanism.
Fig. XV.

6. Needles for electrolysis, platina tipped, insulated to within 1 cm. from tip, three sizes; $\frac{2}{3}$, 1, $1\frac{1}{3}$ millimètres in diameter. Figs.



VI to X; a larger one for pelvic neoplasms (Martin's), 2 millimètres in diameter. Fig. XI. Fig. XIV, needle holder. With this a celluloid speculum is very valuable, as it prevents the accident of

shock, by the metal thumb screws coming in contact with the metal speculum.

7. Two water rheostats for turning on and off the current. The Bailey being an excellent one.

8. A battery having an electro-motor force of 200 milliam-pères when working through resistance of 300 ohms.

9. Two galvanometres registering 250 milliam-pères each. They should be tested and compared.

Platina for metal surfaces of active electrodes is necessary on account of the frequent demand for positive pole.

The following case records will serve to briefly illustrate the results:

N. W., æt. 21, single, servant, American, high strung nervous temperament, came under my care Oct., 1886, suffering from effects of an abortion, accomplished by an abortionist, at the fifth month. Patient exhausted and anemic from her sufferings and loss of blood during the last month, examination revealed a metritis, pelvic peritonitis, with thickening of both broad ligaments, very sensitive, on examination. Treatment by long fine wire coil, later by short large wire coil; dose, comfort; séance, five minutes. After the acute character of the affection subsided, positive galvano-caustic applications to endometrium; dose, 25-40 milliam-pères. Under this the inflammation and neoplasm disappeared, when the left ovary was found enlarged and low down, and sensitive; rest was advised, there being very little suffering. After the lapse of a month treatment again applied; local direct galvanization, alternated with faradization of the sympathetic; in three weeks all evidences of diseased action was gone and patient discharged; time under treatment, two months.

L. Z., æt. 22, single, prostitute, American; phlegmatic temp., came under my care May, 1886; miscarried in Oct. 1885, at the eighth month; menses always free and with clots, made a fair recovery; examination reveals uterus retroverted into Douglas' cul-de sac, firmly fixed, very tender; broad ligaments very much thickened, very tender; deposit about cervix marked and pits on pressure, excessive uterine leucorrhea; large laceration of cervix; local faradization; long fine wire coil; dose, comfort; séance, five minutes. Later electrolysis, needles in cervix only. All inflammation and neo-

plasm disappeared, save the adhesions which held the uterus firmly in retroversion. Emmett's operation for laceration at this stage; union excellent. After recovery from this, the uterus being still firmly fixed in its abdominal position, local massage by elevation and faradization; large short wire coil was employed; mobility steadily improved when in Sept. 1886, soon after her menstrual flow, the adhesions gave way and the uterus was brought into position, the vagina packed with a supporting tampon. Faradization was continued for a week or ten days, when nothing being found wrong she was discharged well. Time of treatment, nine months and three weeks. The exciting cause of the last illness in this case seemed to be a gonorrhea which preceded the attack about ten days.

K. R., æt. 25, widow, servant, German, nervous temperament; came under my care July, 1886; has been sick and under treatment for the last four years; sometimes better and again worse; some pain in pelvis and back; not able to work or be about on account of her sufferings. For several months has had severe menorrhagia. Examination reveals complete retroversion, thickening of both ligaments, very sensitive; prolapse of both ovaries; pelvic peritonitis; mobility of uterus, nil; examination causes nausea; profuse leucorrhea; laceration of cervix and hyperplasia of uterus; vagina short, cervix up and back of symphysis pubis. Treatment by local faradization with long fine wire coil; dose, comfort; séance five minutes. This soon relieved the active process and relieved the bogginess and congestion. When the left tube was distinctly outlined, distended and fluctuating. Short, thick wire coil was used, until all tenderness was greatly relieved. The uterus was now found firmly fixed in its position; positive galvano-caustic applications to endometrium were then used; improvement steadily progressed; the discharges and menstrual irregularities ceased, neoplasm was being surely absorbed. The mobility impressed save at the fundus. Changed to negative galvano-caustic applications. On Dec. 27, 1886, the uterus was readily replaced with pretty severe pain and the adhesions were distinctly felt to give away. Supported by cotton tampon. Local faradization was now employed, short thick wire coil. Improvement had now permitted the operation for the laceration, which was done with excellent result. The seventh day after the operation the patient, who was blessed with a large amount of cussedness, got into a fight with her neighbor, and the result was a re-

currence of her pelvic peritonitis. This was relieved, when on Mar. 2, 1887, she was discharged for insubordination in the following condition: Hyperplasia, pelvic peritonitis, exudates and distended tube entirely relieved. The uterus was drawn slightly over to the left side and backward, to the site of the last inflammation, which was not caused by a rupture of the tube, as this disappeared a considerable time before the operation for the laceration. Entirely relieved of all pain and tenderness, and with the above exception the contents of the pelvis were in a normal condition: general health excellent, having gained fifteen pounds in weight. Time under treatment, seven months and one week.

S. B., æt. 35, widow, housekeeper, American, lymphatic temperament, came under my care Jan. 29, 1886, suffering since Aug. 1885. In June, 1885, she had a gonorrhea, since which time she had had a profuse and constant leucorrhea and dysmenorrhea, abdominal bloating and chilly sensations, throbbing, aching sensations in inguinal regions, with shooting pain into the hip and down inner side of thigh; between menses she has a fluttering sensation in left side; constant backache so that she has been able to be up and about but very little. Examination reveals very great and general tenderness in pelvis, a large mass in right broad ligament, attached to uterus at its upper right portion, extending posteriorly into Douglas' cul de sac, where it joins the thickening in left ligament, which is not so large nor tender; mobility limited; free purulent leucorrhea, uterus not enlarged but tender at fundus. In Nov., 1885, after exertion she had an illness of ten days' duration, accompanied by fever, severe throbbing pain in left inguinal region. The three menstrual periods following were very painful. Just at the close of the third period, during which her pain had been very severe in left side, something seemed to give away, her pain ceased and shortly afterward she passed pus from the bowel, and ever since has had much less pain in left side.

TREATMENT.—Local galvanism at first (Feb. 23, 1886), March 2, 1885, electrolysis by needle in cervix. Four séances after this manner with marked relief from pains and quantity of neoplasm. March 25, 1886, positive galvano caustic applications to endometrium continued to April 13, 1886. A month's intermission followed waiting reconstruction of battery. May 25, 1886, all neoplasm and symptoms having been relieved, save the distended right tube it was determined to empty this, wash out and follow by pos-

itive galvano-caustic applications; 30 cc. of pus were drawn out, the tube collapsing, washed out with sat. sol. of boric acid, and until it came away perfectly clear: the trocar was then attached to battery, and a dose of 60 ma. for 10 min. was given. Strong drawing pains were felt in right side, soon followed by the same kind in left side. These continued through the night: next day she was comfortable, and was up on May 28, 1886. The ovary was now found enlarged and tender to strong pressure. Galvanism was now used, there being a moderate purulent discharge through fistulous tract, with decided improvement and no evidence of tube refilling. The ovary not improving so rapidly, electro-puncture was applied to it, three séances, positive pole, 30 ma. five minutes each. Galvanism was alternated with electro puncture. Her condition steadily improved, all evidences of local trouble disappeared under continued and alternated local galvanism and faradization of the sympathetic. Condition at discharge: All evidences of inflammation and neoplasm gone, right ovary atrophied.

Time under treatment, seven months.

This was evidently a case of double pyo-salpinx, the left one opening into the rectum at the time pus was passed by the bowel in Feb. '86.

The other case of ovarian electro-puncture was a case of peri-ovaritis with an abscess on surface of ovary, which was emptied by the aspirator, washed out and electricity applied as above. This was followed by five electro-punctures into the enlarged ovary, which resulted in a pronounced atrophy of the same.

The length of this paper prevents the presentation of any further case records. In brief, I will state that so far I have had under treatment ten other cases in which the same generally diseased conditions existed, in four of which there probably existed hydro-salpinx. Five other cases have been brought to a symptomatic recovery which evidently had pyo-salpinx but feeling so well refused further treatment, not wanting the tube emptied. Three additional cases of pyo-salpinx have been entirely relieved.

In giving the credit to electricity for the result in the class of cases herein considered, I do so for the reason that I believe it

is justly entitled to it. Certain it is we have not been able heretofore to accomplish like results; and I have not as yet seen the testimony of any one who claims that complete recovery is accomplished by the generally accepted methods of treatment, unless a resort to the knife has been made. I believe the result due to electricity because we are enabled to bring to bear a positive, efficient means of establishing a high grade of nutrition, so strong and effective that the organism is enabled to pass what has hitherto been the limit of repair and, by its profound influence through the nervous system, bring about such changes that the local expression of the disease is abolished. I offer the following conclusions :

1. That the cases in which Tait's operation is indicated are purely those in which inflammation, septic or specific is the active agent.

2. That the removal of this inflammation and its results with restoration of local and general tone is the problem to be solved.

3. That this accomplished, the functional activity remaining is no valid reason why the tubes and ovaries should be removed

4. That in electricity we find the power of restoring such a high grade of nutrition that a recovery from the local expression of the disease is possible.

5. That the removal of the dead effete products, such as pus, is not possible and must be done by surgical methods (aspiration), but that neoplasm in any form will become absorbed and recovery ensue.

6. That electricity will not work alone but must receive legitimate assistance in the direction of maintaining the benefits of each application.

7. That the dominant idea in the treatment should be first the general effects of the remedy, catalysis, the polar effects, electrotonus. Second the polar effect, electrolysis.

8. That electricity should have a fair and intelligent trial before a resort to the knife be had.

9. That Tait's operation is justifiable only in those cases which electricity will not *completely* relieve.

3026 Pine Street.

POLIOMYELITIS ANTERIOR ACUTA INFANTILIS—
ESSENTIAL INFANTILE PARALYSIS—THE
RATIONALE OF ITS TREATMENT.¹

BY C. H. HUGHES, M. D., ST. LOUIS, *late Vice-President Section of Neurology and Psychiatry and Section of Physiology, International Medical Congress; Honorary Member British Medico-Psychological Association.*

THESE two names most clearly express both the pathology and distinguishing character of this unique malady. It is, as these names imply, an acute inflammation of the anterior gray horns of the spinal cord in infants—a true poliomyelitis, coming on suddenly or with little premonition, in infantile life, between the ages of four and forty-eight months.

A short initial febrile stage with precursory chill sometimes, but by no means always, characterizes its coming on. Sometimes a specific fever precedes it, especially an exanthem like scarlatina or measles, and I have known it to follow a typhoid fever of ten weeks' duration in a boy of three and a half years, syphilis in an infant of six months, diphtheria in several children of different ages, and in one instance to follow immediately after a fall down stairs, the child having been previously exposed to marked malarial influences, and in another child to proceed directly without previous fever of any kind, from the child lying, in hot weather, with its back to the cool hearth stone, and falling asleep in that position. Notwithstanding no authority has so stated, I believe malarial influence and congestion of the spinal cord, coupled with an exciting cause, as of a spinal concussion, not sufficient to cause the disease without this influence, have much to do with the development of these sudden cases, in this attitude, which appear to come on in those robust appearing

1. A paper announced but not read before the St. Louis Medical Society at a late meeting in July prior to adjournment for the summer and pending the discussion of the subject.

children who so often surprise us by becoming suddenly its unfortunate victims.

These, and those cases associated with a previously entailed syphilis or acquired diphtheria, are the cases in which success in treatment has, in my experience, been most uniformly gratifying.

These cases are in my judgment adneurial or extraneural in character, in which the anterior cornua are oppressed to the point of absolute inability to originate or send out motor impulses, by either adventitious depositions or congestion, and not by inherent atrophic degeneration of the anterior horns of the gray matter of the cord.

In fact, congestion and inflammation are the conditions of the gray cornua of the cord which are first to be combated in this disease, and this fact gives us the clew to the therapeutics we should adopt and adopt promptly in its management, if we would be successful in our results. The atrophic degeneration is a sequence of inflammatory destruction. This fact should give us hope and warning, and should inspire to prompt and vigorous combative, rather than to passive expectant treatment. I do not mean vigorous faradic stimulation, either peripheral or from center to periphery of the cord. They exhaust motor excitability at this stage, and the wrong kind of battery employed at this period becomes an engine of destruction rather than a conservator of power, and the latter is what we want as well as something to restore lost power. The only form of electrization at this early stage, when the anterior cornua of the cervical or lumbar enlargement of the cord are involved in congestion and inflammation, is the mild, descending galvanic (uninterrupted) current, sent down through the damaged segment of the cord, out through the channels of motor conduction to the terminal endings of the nerves in the atrophied flabby and motionless muscles.

We must have a correct conception of the nature of this interesting disease to treat it rationally. To its nature now, I further briefly invite your attention, and then to its rational and successful treatment.

Poliomyelitis anterior acuta infantilis is ordinarily an ob-

scure, warm weather, infantile spinal disease, seldom coming on in winter or after the age of four years. It is as common among the robust as among sickly children; some authors think more so. It may follow dentition, scarlet fever, measles, typhoid, malarial or other fever, or a concussion or a traumatism. My own conviction is that any influence capable of developing inflammation and any cause capable of localizing such inflammation in the cord may produce it, and that there is more or less of a neuropathic tendency in all cases as a predetermining factor. I think both Gowers and Buzzard right in their seemingly paradoxical statements, the one being strongly impressed with its heredity, the other believing that "it is more common than not for the disease to attack fine grown hearty children, for neuropathic heredity generally does not materially impress itself in an apparent manner upon the nutrition or growth of infantile life.

Two cases will suffice to illustrate.

In the fall of 1880, little H. M., who lived from birth in the malarious atmosphere of Southern Illinois and the "Potomac Flats," in her fourth year fell down stairs. No bones were displaced or fractured. A few days afterwards pain in lumbar region of the spine appeared, with fever, an initial chill followed by inability to move the lower limbs.

The anal and vesical sphincter functions continued to be normally performed.

Her physicians treated her without avail for several weeks and then sent her to me.

Under three grain dose of quinine and one of ergot four times a day, with hypophosphites, bromides, iodides, belladonna and the constant galvanic descending current, fifteen milliampères, ten minute séances twice daily, the recumbent posture and good nutrition, this child recovered so as to stand alone at the end of four weeks. Peripheral faradism was then applied daily, and the child walked with assistance across the room at the end of the sixth week. In a few weeks more she was discharged, as recovered. She has remained well ever since, and is now a remarkably healthy child, large for one of her age and without the slightest deformity of limb. No faradic reaction could be obtained in any muscle but

the tibialis anticus of the right leg and foot, and some galvanic reaction in the left. I treated the child on the hypothesis of latent malarial fever and consequent spinal congestion with anterior cornual inflammation. I think the facts and the sequel verify the diagnosis.

Case II. A young child, daughter of a well known oculist and member of this society, at the age of about two years and eight months, during the hot days of August, being overheated, would lie down on the cool stone hearth and fall asleep. After one of her naps in this way she was found to be paralyzed in her lower limbs much like the preceding case, save that when brought to me for treatment, several weeks after the attack, she showed some spontaneous recovery of the right limb, the limb which, by the way, most often more or less recovers. The other limb was atrophied in nearly all of its flexor muscles, and there was reaction of degeneration. The child recovered, and is now doing well, many years after. The father is present and can, if necessary, give fuller details of symptoms and treatment.

I have treated a number of cases that have not recovered. The one referred to as probably caused by typhoid fever has not; and I have known recovery to fail when I thought the cause was hereditary syphilis.

As we have said, poliomyelitis is in its nature inflammatory and congestive. The vaso-motor mechanism, as in so many other diseases of the nervous system, is probably first stricken, though medical opinion is not concurrent as to whether the blood-vessels and connective tissue or the nerve elements are first affected.

This being an inflammatory disease, we feel safe in concluding and have conducted its therapeutic management upon the, to us, quite apparent fact that the vascular lesion is first and the structural is secondary or coincident, as Bramwell asserts. The immediate effect of this is to overwhelm the motor centre of the cord; the ultimate and not remote effect is the destruction of the multipolar nerve cells, "atrophy of the axis cylinder processes of the anterior root fibres," and, as a matter of course, and of pathological and physiological necessity, atro-

phy of the muscular fibres nourished and innervated from the lumbar or cervical enlargements of the cord.

This gives us the indications for our treatment. The vascular riot of the cord is to be first and promptly subdued. The tumult of these tissue destroying influences must be first of all promptly quieted, and whatever damage to the nerve elements remains is then to be attended to. But we must first subdue the violence of the tumult, and then after the riot is quieted and the bloody rioters are driven out, the structural damage is to be repaired. We may be called to the rescue too late, and find only damage irreparable. There is undoubtedly danger in delay here, as in so many other diseases of the nervous system which are neglected or left expectantly to be outgrown. But how are we to know what we might do without trying? The reaction of degeneration does not make prognosis hopeless, for cases do recover after it appears.

If the reaction of degeneration means complete cornual atrophy, then new motor foci and channels of conduction are formed or function is established vicariously. But we need not infer destruction absolute, because function is lost and muscular atrophy follows. It may be only vascular or inflammatory product pressure, in some motor centres, and these are sometimes removed.

At all events, it is on this basis that we may have hope and success of cure in many of our cases. It is on this basis of its pathology that we urge prompt and persevering treatment; that we discountenance the plan of letting the child try to outgrow it. The child on the expectant plan usually grows out of it with talipes and limp, wasted limbs. The only cases in our judgment that can by any possibility recover spontaneously are mild, exclusively congestive forms without muscular atrophy. They are the forms that do best under treatment too, probably rewarding us most promptly and certainly.

The treatment now, if we are right in our pathology and understand precisely the powers of our therapeutic agencies, is obvious.

The form of electricity employed should be of the kind which soothes, does not irritate, does not excite the oppressed

motor centres of the cord, but takes off the pressure by contracting its arterioles, diminishing the blood supply, controlling inflammation and removing inflammatory deposition. This is the constant galvanic descending current passed through the cord from damaged motor centre to the affected periphery and none other. Later, when the damaged motor centre can bear peripheral excitation, the faradic and the induced static may be wisely and usefully employed.

Now the ergot and the belladonna and the bromides, any time during the progress of the case, arsenic, and later when excitation with increased spinal circulation is tolerable, strychnia, but in the beginning only the very smallest doses of strychnia, if any, for vaso-motor tonic purposes solely. We give very little strychnia at this stage. The same indication that calls for rest to the cord indicates abstention from large doses of strychnia, and from faradism.

If pain or fever be present, ether spray to spine, ice; gelsemium, aconite, antipyrine and the antiphlogistics internally.

Such in brief is the best outline therapeutics for the essential paralysis of children. All cases do not get well under it, but enough satisfactory recoveries occur under the present discouraging circumstances connected with the treatment of these little patients, to give us hope for a brighter future for them, when the family physician will either treat them promptly and correctly or send them to a neurologist who will take the necessary and timely pains with them. General medicine made nervous disease an opprobrium till neurology grew into a recognized specialty and gave hope to thousands, as it has given to these little ones, who are too often left to the tender care of blind dame nature to grow up, in some instances I am sure, needlessly deformed.

ADDENDUM.

RESUME OF DIAGNOSTIC POINTS.

1. Polio-myelitis is not not progressive in character.
2. It is exclusively a motor trouble, sensibility not being affected.
3. The sphincters are not paralyzed.
4. There is no decubitus.

5. There is muscular atrophy often followed by contraction and deformity.
6. When complete it gives no response to faradic electricity.
7. Muscular response to galvanism or voltaic electricity gradually diminishes to end of first week, when it begins to rise and finally becomes exalted for beyond normal response as compared with healthy side.
8. Response to the poles is altered; normal response to negative and positive pole changes—anode loses, cathode gains in influence.
9. After thirty days galvanic-muscular response fails decidedly.
10. Finally galvanism excites no response.
11. Paralysis in infants following a chill when the body is heated gives suspicion of polio-myelitis anterior.
12. The absence of anesthesia, of a characteristic decubitus, of paralysis of sphincters, distinguish it from acute central or transverse myelitis.

THIORESORCIN.—Ewer and Pick have patented a substitute for iodoform under the name given above.

It is said to be prepared by heating an aqueous solution of 2 molecules of resorcin and 6 molecules of sodium hydrate, with 6 molecules of sulphur, until the latter is dissolved; muriatic acid is then added, with the result of causing the formation of a slightly yellowish, flocculent powder. This is further purified by dissolving it with the aid of carbonate of sodium, and precipitating with dilute muriatic acid. In the pure state, thioresorcin forms a grayish, flocculent powder, insoluble in the ordinary solvents, but dissolving freely in the solutions of the alkalies, alkaline carbonates, and alkaline sulphides. It is an odorless, powerful, and non-irritating antiseptic, satisfying all the purposes for which iodoform is used, and is just as cheap. Supplies have just been received here, and several prominent surgeons are experimenting with thioresorcin; the results obtained will soon accentuate the flattering testimonials already received from European surgeons, and extended popularity is safely assured for the new antiseptic.—*Notes on New Remedies*, July.

CASES FROM PRACTICE.

CASES ILLUSTRATING THE USE OF ELECTROLYSIS IN THE TREATMENT OF ENLARGED GLANDS AND TUMORS.

BY T. E. POTTER, M. D., ST. JOSEPH, MO.

[*Read before the Mo. State Med. Ass'n, Kansas City, Mo.*]

The study of electricity and its various applications to all forms of disease is receiving from the members of the medical profession more attention at this time than at any other period.

While the scientist is utilizing this wonderful force in the running of machinery, transmission of messages, and the lighting of streets and buildings, the doctor of medicine and surgery is most zealously engaged in searching out how this wonderful fluid may be most advantageously applied in his art in eradicating disease and removing deformities.

There is no branch of this important question filled with more charming and fascinating interest than that division relating to the treatment, by electrolysis, of diseased glands and the reduction of unnatural growths and tumors on the human body.

This treatment consists of the process of chemical decomposition by the action of electricity or galvanism.

The question naturally arises, what will electricity decompose in surgery, and to what extent can we rely upon it for this purpose? Not wishing to consume too much time in attempting to mention anything like all that can be accomplished by the use of this agent in the healing art, I desire to place on record some of my own observations as to its application to the morbid growths mentioned in the caption of this paper.

To me the results seem simply wonderful. No investigation ever proved more exciting or interesting.

During the month of September, 1887, a young lady presented herself at my office, suffering with an enlarged thyroid gland. The enlargement was unilateral. In appearance it was about the size of an orange. It was of the cystic variety. I began the treatment by electrolysis. The application of the electrodes to the outer surface of the tumor reduced its size one half. After this there was no further reduction; so about October 1, I gave her ether, inserted a gold needle attached to the negative electrode, and then applied the positive electrode to the outer surface, and in about twenty minutes the growth seemed to be entirely decomposed. It had the appearance and sensation to the touch of cellular tissue inflated with air by inserting a blow-pipe under the skin and blowing it up. She returned to her home in five weeks, perfectly well and happy.

I am now treating another goitre by external electrolysis. It is of the same variety as the first mentioned, only bilateral instead of unilateral. It is the largest I have ever seen, and has been present since the patient was eight years old. She has received every variety of treatment, from faith doctors and at the hands of the most scientific physicians of the land—all with no effect. The removal of the first mentioned goitre induced this lady to try, as her husband, as well as herself, has been very anxious to have the growth removed. She has been under treatment now, at this writing, about one and one-half months, with daily applications, and this large tumor has been reduced at least one-half by the external application of the electrodes, and is still diminishing. I have not yet inserted the needle, for I do not desire to use it as long as there is evidence of reduction without. I have no doubt of the complete final removal of this growth. It is fair to say that in these two cases, in connection with electrolysis, I have used tr. iodinii comp. six drops three times daily.

During the summer of 1885 I witnessed the removal, by electrolysis, of a malignant growth, on the neck of a gentleman. It was as large as an ordinary sized partridge egg, and was reduced at one sitting to a very small nodule. The tumor was of the lupus variety.

Will electrolysis remove fibroid and vascular growths? There is no doubt of it, for the medical literature of to-day teems with cases of this kind that have been removed by this marvellous agent. I attempted the removal of a fibrous tumor during the winter just

past. After three insertions of the needle there was considerable reduction, which was evidence that the growth would soon yield; but the treatment was quite painful, and on that account the patient wished to resort to the use of the knife, in preference to continuing with galvanism. There was one feature about the three attempts at removal that I wish to mention, *i. e.*, at each sitting there was, on the removal of the needle, an escape of gas at the opening made by its insertion, the escape being caused by pressure on the growth.

The question now naturally arises, how does this potent agent perform its work?

On the insertion of both poles into an albuminous material, and passing the current through it, there is coagulation around the negative pole, and this escape of gas around the positive, which is proven by the bubbles of air that are shown in the fluid at this point. There is, without doubt, a true process of decomposition. While it coagulates the albumen, the gas accumulates under the cellular tissue and in the structure of the gland, as mentioned in my first operation, and makes it have the appearance of air in the structure.¹

Dr. Hardaway, in 1884, before this association at Sedalia, Mo., stated, in a paper with reference to the removal of hairs by electrolysis, that the needle should be left in until a frothy material escaped at the but of the hair. So, I think, on inserting the needle into the body of the tumor, let it be vascular, cystic, glandular or fibrous, it should, if good is to be accomplished, remain long enough for the tumor to have, throughout its entire structure, a crepitant feeling, as though it was filled with air or gas. Until this is the case the treatment is not likely to be successful. I think in all these cases it is well enough to use the compound tincture of iodine as an absorbent. For, as chemical decomposition takes place by electrolysis, the iodine aids the absorption of the decomposed material, and in this way hastens repair.

With reference to uterine fibroids I have not as yet had any experience, but Dr. Ephraim Cutter, of New York, reports several cases of uterine fibroids, removed last year by electrolysis, and the arrest of the growth of others. In conclusion he says: "Hereafter

¹The free escape of gas takes place at the needle connected with the negative pole.—[Ed.]

any physician who says uterine fibroids are hopelessly incurable, is not sustained by the facts and evidence."

The treatment of aneurisms, by means of electrolysis, is obtained by the use of the negative pole attached to the needle, and the insertion of said needle in the growth. The result is coagulation of the clot around the needle. I know several cases have been reported, but I think the practice is attended with very great danger. The insertion of the needle into a large or small aneurismal sac may cause an immediate rupture of the growth, and I am fearful that the results would be so disastrous in many cases that no operation of the kind should be very strongly endorsed.

Electricity will destroy healthy as well as diseased tissue, and there is nothing in the form of fibrous tissue exempted from its action.

To properly treat the tumor it is necessary to keep it as much as possible between the two poles, and allow the currents to pass, as much as possible, through the morbid structure. The skin will often slough under the influence of the current. It has the appearance, when such is the case, of being burned by a stick of nitrate of silver.

I think there is another advantage in the application of this agent to tumors and growths. It causes them to contract as the stimulus passes through them, and I think, without doubt, it excites the absorbents also and increases their activity. This was true, I think, in the case of lupus mentioned. Three or four days after the operation there were red spots on the side of the face and neck that indicated that the absorbents had been very active.

TREATMENT OF NASAL FIBROMA BY ELECTROLYSIS.

ALFRED SHIPMAN, M. D., PLATTSMOUTH, NEB.

I was requested to visit P. M., aged 61, a carpenter by trade, Aug. 1886, and on examination I found his condition to be as follows: Temperature 100°, respiration 24, and oral; pulse 97. Patient is emaciated, and has a distressed careworn look, is very nervous and restless. Says that he cannot sleep, that should he happen to get to sleep he is awakened by startling dreams and a

sense of suffocation, that he has an irregular fever followed by profuse sweating. Says he has not breathed through his nose for several years, and that, for some months past it has been impossible for him to force any air through either nostril. That he has constant headache, a feeling as if his head would burst. He further states that he has had what his physician called catarrh for fifteen years, that his nose has been growing larger for several years past, thinks that he will soon die unless he can find some relief, and wants some radical measures adopted.

On inspection I found the left nostril enormously distended with a very firm flesh colored growth, the nasal septum partly destroyed. The tumor had also effectually closed the right nostril, so that no air could be forced through it by the patient's best effort. The left side of the nose bulges out far to the left, and upward so as to partly conceal the left eye, giving the patient the characteristic frog face, in an exaggerated degree.

Just within the nostril the tumor measures one and a half inches in diameter. It fills the whole nasal cavity and protrudes into the pharynx through the left posterior naris about half an inch. The left nasal bone is apparently absorbed, and considerable of the growth seems to be outside of the nasal cavity, and was in its progress dissecting up the integument covering the left side of the face. As the patient had suffered greatly from hemorrhage, I did not attempt to determine the point, or points, at which the tumor was attached. Hemorrhage more or less profuse had been of almost daily occurrence, and thereby his strength had been greatly reduced. A slight but very offensive watery discharge flowed from the growth. The lachrymal duct was obstructed, and the tears flowed over the face. The constant obstruction to the flow of the natural secretion of the parts, together with the pressure of the tumor upon the surrounding structure was evidently causing extensive ulceration, and the pent up products of decomposition, unable to escape, were being absorbed, of which fact the fever, sweating and prostration were abundant evidence. At one point near the centre of the deformed nose, the integument seemed very thin, and here I made an incision sufficiently long to admit of free drainage and thus gave exit to a great amount of very offensive pus. This gave great relief to the pain about the forehead.

The patient now began to improve somewhat, and his condition becoming such that I thought it possible that he might be able to

submit to an operation, and desiring to give my patient all the advantage that might accrue from a multiplicity of council, consultations were held at various times with the following gentlemen Drs. J. H. Hall, E. W. Cook, T. P. Livingston and R. R. Livingston. At this time the tumor had begun to push its way up through the incision above mentioned—and all those gentlemen after a careful examination were so firmly of the opinion that the tumor was malignant, and that its removal by operation would be so difficult, that they could only advise a palliative course of treatment. Respecting the freely expressed opinion of such able counsellors, I was inclined to acquiesce in their decision, but the patient would not have it so, and demanded that something more be done.

The removal of the tumor by any ordinary operation being out of the question, I began to look about for some other means by which to afford relief. Believing that the treatment by electricity, if not successful would do no harm, I concluded to give it a trial. This manner of treatment was at once entered upon, and the happy result achieved gave me great pleasure, and what was of more importance, the patient speedy and permanent relief.

The method of treatment pursued was as follows: The battery used was a 24 cell McIntosh. The first operation was done as follows: An ordinary gold plated electrolytic needle small size, was thrust into the lower end of the tumor about half an inch, and connected with the negative pole of the battery, the positive pole attached to a large sponge electrode, placed upon the thigh, six cells in circuit. I gradually switched on cells until eighteen were in circuit. Time in all ten minutes. This rather strong current was easily borne, but proved to be too intense, as it caused a slight slough, and it was nearly two weeks before another treatment was given. After the first application I invariably passed both currents through the tumor, both needles being thrust into it, as far apart as possible, using the current of six, gradually increasing to twelve cells. Two treatments a week were given, time of each application never exceeding ten minutes. The third application was followed by a profuse hemorrhage. After several weeks of treatment no decided evidence of improvement could be discovered. The growth was as large as ever, hemorrhage increased and the man's strength again failed, and his condition had become pitiable in the extreme. The treatment was left off for some time, until

the patient requested that I try it once more. I must confess that he had more faith in it than I had.

Having seen something in the journals regarding the superior electrolytic effect procured from needles of zinc, I had some made of this metal. They were made but little larger than a heavy cambric needle. And with the improved needle the treatment was resumed. I should say that those needles were insulated to within a half inch of their points by drawing over them a piece of a No. 1, elastic catheter.

I was most agreeably surprised at the rapid change that followed the use of the improved needle.

While there was no discomfort whatever from their use, there was a most intense effect produced upon the tumor.

A profuse watery discharge from the growth flowed from the nostril; the tumor shrank rapidly; the pressure upon the surrounding structure was relieved; the hemorrhages ceased; the patient began to breathe through the right nostril.

His appetite improved, he obtained refreshing sleep; the tears again flowed through the lachrymal duct. The patient became cheerful and hopeful, and it was evident that recovery was no longer doubtful. I continued four weeks more with this treatment after which no further application was required. The tumor had shrunk to the diameter of less than one inch, and two weeks after the last sitting I removed the entire growth, prying and twisting it off from its broad attachment to the floor and outer walls of the anterior portion of the left nasal fossa. Back of the tumor necrosed bone and numerous calcareous concretions blocked up the posterior nares. With the forceps and spoon the cavity was thoroughly cleared of all diseased structure.

But another source of trouble was now manifest. About the time that the tumor began to shrink away, a fungous growth sprang up from the edges of the incision which had been made in the side of the nose. This excrescence, grew with amazing rapidity, and soon attained the size of a small orange, and was regarded by those physicians who saw it as further evidence of malignant disease. The growth attained such a size as to conceal the left eye. Having satisfied myself as to its character, carefully protecting the eye with a dossil of cotton, I applied a two per cent solution of chloride of zinc twice daily: the strength of the solution, was increased daily until a ten per cent solution was in use. The result

was all that could be desired, and the morbid structure entirely disappeared. The incision closed, the shape of the face again became natural. The man's health and strength was fully restored. He resumed his former occupation, and he is at this date, June 25, 1888, in the enjoyment of his usual health.

THE PROTESTANT HOSPITAL ASSOCIATION OF ST. LOUIS has just issued a report of the institution conducted under its auspices. The association owns and has nearly paid for the building now occupied on Eighteenth St. bet. Wash and Carr Sts. This is well furnished and thoroughly equipped with all facilities for efficiently caring for the sick. A full staff of competent physicians and surgeons care for those sick who entrust themselves to their skill. Any reputable practitioner can place patients in this hospital for the advantages of skilled nursing and proper surroundings with full confidence that his directions as to treatment will be scrupulously regarded.

We take pleasure in calling the attention of our colleagues to an institution with the work of which we were ourselves for many years actively connected.

THE CHILDREN'S AID SOCIETY OF MISSOURI has secured the old O'Fallon Mansion in O'Fallon Park which has been fitted up as a sanitarium for sick children. Physicians of the city are invited and urged to send to the sanitarium children not exceeding three years of age not suffering from contagious or infectious disease, but from an ailment of such character as would probably be benefited by the fresh air and healthful surroundings and careful attention there offered. It is expected that the mother or some other adult will accompany the child. Children are admitted on presenting a certificate setting forth the facts above mentioned, and the opinion of the physician that they are worthy objects of charity.

This Children's Aid Society is doing a work in which all philanthropists are deeply interested, combining the Fresh Air Mission, The Country Week, Children's Sanitarium, and the providing of homes for homeless children. Further particulars can be obtained by addressing the secretary, Grant Tilden, 405 N. Eleventh.

EDITORIAL.

HABITUAL CONSTIPATION IN INFANTS.

At this season of the year when the thoughts and anxieties of physicians have been largely taken up with the summer diarrheas of infants, it may be appropriate to consider the opposite condition which is often of serious importance and the source of much trouble to parents and physicians.

In the *British Medical Journal* July 7, we find an excellent paper on this subject from Dr. Eustace Smith. He lays great stress upon the importance of due attention to diet and other matters of hygiene including proper clothing.

One great cause of costiveness is an excess of starch in the diet or of other food which overtaxes the digestive powers of the child causing a mild catarrh of the intestinal mucous membrane, as the result of which an excessive secretion of mucus is formed, which covers the fecal masses, rendering them slimy so that the mucous membrane of the intestine slips over them without driving them onward.

Another cause of constipation is dryness of the stools caused by the food being made too thick or the failure to supply water to drink. Another cause which sometimes needs to be guarded against is the improper use of opium by nurses.

For the relief of this condition Dr. Smith urges attention first to the food and clothing. When an infant is at the breast a teaspoonful of syrup three or four times a day before nursing will often quickly restore the normal regularity of the bowels. If the stools are habitually dry and hard; care should be taken that the child has

sufficient liquid with his food and in addition he should be given some plain filtered water. Babes in arms often suffer for want of water on account of the failure of parents and nurses to realize that the little ones may be thirsty. Sometimes the administration of a dessertspoonful of some natural saline aperient water at night aids the return of the stools to their natural consistence.

In many cases improper clothing by which the lower limbs and belly are unprotected and so exposed to chilling is the cause of mild intestinal catarrh and consequent constipation. In such cases not only the belly must be protected with flannel but the legs and thighs also. The diet must be regulated, excess of starch must be avoided. Dr. Smith advises the use of one of the malt foods, specially commending Mellin's food as being of value in these cases, as in many children this food has a slightly laxative effect. Dr. Smith advises the addition of some thickening material, as barley, "to insure a fine division of the curd." He says: "A child of six months will usually digest well a good dessertspoonful of Mellin's food dissolved in milk, diluted with a third part of barley water. As a change he recommends Benger's self digesting food, an article which we do not think is in the market in this country, but for which might well be substituted peptonized milk. To a child ten months old one meal a day may be given of veal broth or beef-tea.

Wherever there is habitual constipation systematic rubbing and kneading of the child's belly should be practised every morning after the bath. Friction may be continued for five minutes in a circular direction following the course of the colon. In obstinate cases kneading with the thumbs may be used in the same direction.

Suppositories and injections he regards as of only temporary use, causing an immediate evacuation and present relief, but in no way tending to secure more regular action in the future. The injection of small quantities of glycerine, concerning which much has been written in the journals of late, he characterizes as "another

old-fashioned plan," which "has been lately revived." He speaks of its prompt effect, but considers it also of no value for the relief of habitual constipation.

For permanent cure he strongly prefers medication by the mouth, but cautions us to find the smallest dose which will awaken a normal degree of energy of peristaltic action, and to give this dose regularly so as to induce a habit of daily evacuation. The daily dose is most efficacious when combined with a remedy which tends to give tone to the muscular coat of the bowel. He recommends a draught composed of half a drop of tincture of nux vomica with ten drops of tincture of belladonna, B. P. [British tr. belladonnæ is only about one half as strong as that of U. S. P.] and twenty of infusion of senna, made up to a fluid dram with infusion of columba. This is to be given at first three times a day before food but soon twice a day will suffice, and generally it is not long before a dose at bed time has a sufficient effect. The object of course is not to cause watery evacuations but as faithful an imitation as possible of a normal action of the bowels. The liquid extract of cascara sagrada is also a useful remedy especially if combined with belladonna. Twenty, thirty or more drops of cascara extract with ten of belladonna tincture [vid. note above] may be given with a few drops of glycerine in water every night. Dr. Smith states that a remedy in high repute in the west of England consists of a half grain of sulphur colored red with cochineal. His own experience has shown that this apparently insignificant dose when given regularly every night is quite effective.

When the evacuations are unnaturally dry, and simple dietetic regulation does not relieve the condition, he recommends the administration of some saline aperient two or three times a day. This treatment is increased in efficacy if combined with small doses of nux vomica and quinine. For a baby of six months he would give five to ten grains of sulphate of soda, one-quarter grain of quinine, one-half drop tincture of nux vomica and a minim of aromatic sulphuric acid in a teaspoonful of water three times a day

before food. By this plan of treatment the bowels are stimulated to regular spontaneous action; and soon the dose may be given less frequently and then omitted altogether.

ETHICS OF MARRIAGE.

We notice under its appropriate heading a little volume from the pen of Dr. H. S. Pomeroy, of Boston, with the above title, but are moved to add another word here on the subject to emphasize the importance of one or two points which the author brings out in his book.

We have long felt that family physicians too often ignore or neglect an important responsibility and privilege which devolves upon us in the delicate and confidential relation which we bear to the families in which we attend. We should see to it that the young people over whose health we have supervision are truly taught concerning the laws of their being.

No mother should allow her daughter to come to the age of puberty without instructing her with regard to the changes which take place at that age, the new function which is established at that time, and how to care for herself at the monthly periods. No father should leave his boys to gain their knowledge concerning the function of procreation and the dangers of improper use or abuse of their generative organs from playmates or servants.

The family physician should aid the parents in this matter by urging them to this most important duty, by suggesting special precautions which he may see to be needed in special cases, sometimes by himself giving the youth the instruction which the parent has not the intelligence or tact properly to impart.

The author of the book just mentioned has well expressed this thought as follows: "The individual on the threshold of manhood or womanhood should be taught, earnestly and reverently, the laws and functions of the whole being as far as these are known to

science; should be taught the meaning and aim of the reproductive instincts and passions, and the serious responsibilities they imply. It may be objected that this sort of instruction is largely beyond the comprehension of the boy or girl of ten or twelve, and even if comprehended would inflame the mind and work great mischief.

"This is a mistake; the American boy or girl scarcely more than half the age referred to is capable of understanding and often does understand, almost everything which should not be known about this matter. It certainly does seem a pity that the young person may not be spared the burden of knowledge of this sort for some years beyond the time indicated; but this is seldom possible, for in various ways—from nature, from comrades, and from stories—children will learn about reproduction, and the information which comes to them in these ways piques curiosity and may inflame passion, but never properly instructs."

Further on the author says: "When the world was young and society simple, much ignorance and a little guarding might avail to keep boys and girls virtuous and safe; now the ignorance is impossible, and the only sure defence is that which lies in correct knowledge."

The other point as to which we would add emphasis to the words of our author is one with regard to which Sir James Paget uttered some true words a few years ago. Our author says: "Young men should guard their virtue as a priceless treasure. Society may shut its eyes to their lapse from virtue, or may even smile at it, but society is powerless to absolve character from the damning blot. A pure, noble wife is the best gift this world holds for any man, and he can pay for it only in kind; position, wealth, and all else besides that he may offer, count as the small dust of the balance in comparison."

As physicians we have not filled the measure of our responsibility when we refrain from prescribing fornication. We should by example and precept inculcate upon our patients the truth regarding sexual hygiene. The pure man is the true man.

A pure woman has the same right to demand a pure life from him who seeks to be or is her husband as he has to ask the same of her. For the fact that so large a proportion of men do not live such lives a larger share of responsibility falls upon the shoulders of our profession than we have been wont to admit or generally realize.

DANGERS OF ANTISEPTICS.

The *Brit. Med. Jour.*, for May 19, 1888, publishes a reprint from their Berlin correspondence of a paper recently read by Dr. Emil Saenger before the *Berliner Medicinische Gesellschaft*, on the influence of antiseptic remedies on the organs of the body, with special reference to operations on the kidney. It says: It is well known that after nephrectomy, or even nephrotomy, many patients die with symptoms of uremia or anuria, even when it has been ascertained beforehand by careful examination that the other kidney was quite healthy, and capable of secreting the necessary amount of urea. A very complicated theory has been profounded by Israel as to certain nervous sympathies between the two kidneys, whereby an operation on one may give rise to degeneration of the other. Saenger has now proven by experiments on rabbits and dogs that our antiseptic remedies are the cause of these complications. He injected into the animals, when in perfect health, one-tenth or one-twelfth the quantity of corrosive sublimate, carbolic acid, etc., which is sufficient to kill them. He then extirpated one kidney, and examined it microscopically, with the result that in all cases he found glomerulo-nephritis.

There was exudation between the glomerulus and the capsule, and the epithelium of the tubuli contorti was almost entirely destroyed. He found also fatty degeneration of the liver, spleen, heart-muscle, etc. The various antiseptic agents were found to be injurious in different degrees, corrosive sublimate being the most

dangerous, the others in the following order: iodoform, carbolic acid, salicylic acid, boric acid. Saenger therefore recommends surgeons to avoid antiseptics in operations on the thorax and abdomen, and urges them either to employ sterilized water after the manner of Lawson Tait, or a solution of salt. By bacteriological and pathological researches he proved, first, that this kills the streptococcus pyogenes aureus in 28 minutes, and that the effect is independent of the degree of concentration, for a five per cent is just as effectual as a 20 per cent solution. Secondly, he claims to have shown that chloride of sodium does not in any way injure the organs, and that no dose is strong enough to kill any animal.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

"The Mississippi Valley Medical Association meets at St. Louis, September 11-12-13. The programme includes many papers and discussions of importance. The first day will be given to the discussion of abdominal surgery, the second, to infant feeding and some obstetric subject. The third day will be taken up with volunteer papers and some neurological subject. Arrangements for reduced rates are being made, and the Society cordially invites all members of the profession in the Mississippi Valley, to be present."

We take pleasure in calling the attention of our readers to the above notice received from the secretary of the Association. This is one of the most valuable medical associations in the country, and in character of professional work done, it compares favorably with any, even the American Medical Association. Arrangements have been made by the local committee and by the other officers of the association which promise a very successful and profitable meeting in our city. The *Courier* extends a cordial welcome to all members of the association, and predicts that the coming meeting will be recorded as the most successful in the history of the society.

BOOK REVIEWS AND NOTICES.

A MANUAL OF DISEASES OF THE NERVOUS SYSTEM. by W. R. GOWERS. M. D., F. R. C. P., Assistant Professor of Clinical Medicine in University College, London; Physician to University College Hospital, etc. American edition, issued under the supervision of the author. P. Blakiston, Son & Co., Philadelphia, 1888. 8vo., pp. 1357, cloth. \$3.50.

There has been an increasing demand for Dr. Gowers' publications. One has only to read any of them to be convinced that their popularity is well deserved. Gowers is an accomplished pathologist, a clinician of extensive experience, a scholar of wide reading, especially of neurological literature: besides these accomplishments he possesses the charm of using good English well. Also he has taught classes of students long enough to become an accomplished teacher. His ideas are practical, and he knows how to get them together in practical shape in a book. If they did not know it before, a careful reading of this volume will convince its readers of these facts.

The work perhaps covers more completely and satisfactorily the whole field of modern neurology than any one issue in one volume. In fact the publishers, we fear, have attempted to get too much between two covers, for the book has a clumsy and flimsy appearance. Typographically, also, there is room for improvement, especially in the cuts, which are reproduced from former works for the most part, and often with only partial success. Of course these faults only detract from the value of the work in a secondary manner. Those beginning the study of diseases of the nervous system will not find it an inconvenient text-book, while for those already more or less informed, it is an excellent reference book. The index is not as complete as it should be, but the convenient arrangement of the various subjects and parts of the work largely makes up for this.

We predict for the book an increasing popularity.

F. R. F.

THE APPLIED ANATOMY OF THE NERVOUS SYSTEM, Being a Study of this Portion of the Human Body from a Standpoint of its General Interest and Practical Utility in Diagnosis, designed for use as a textbook and a work of reference, by AMBROSE L. RANNEY, A. M., M. D., etc. Second edition, D. Appleton & Co., New York, 1888, 8vo., pp. 791, cloth, \$5.00.

This work hardly needs an introduction. It suggests an old friend in a new suit of clothes, much improved in appearance thereby.

The work justly claims to be "profusely illustrated," and its value largely depends on this fact. Especially it abounds in ingenious diagrams by the author and others, which accomplish admirably the purpose for which they are intended, namely, to bring to the mind correctly for the first time impressions of the many intricate and troublesome anatomical and physiological points about the nervous system that so perplex the beginners in these studies. This new edition contains many new cuts of this kind, for which the author has a faculty that any one attempting to teach may well envy him.

We look upon the work as a valuable supplement to the more complete works on the anatomy and physiology of the nervous system.

As a reference book on diseases of the nervous system, we consider it of little or no value; it is neither complete nor accurate enough to be reliable.

F. R. F.

THE NATIONAL FORMULARY OF UNOFFICIAL PREPARATIONS. First Issue. Published by the American Pharmaceutical Association, 1888. 8vo., pp. 176, cloth.

This little volume is the outgrowth of the work inaugurated several years ago by the College of Pharmacy of the City of New York, the King's County Pharmaceutical Society of Brooklyn and the German Apothecaries' Society of the City of New York, who appointed a joint committee to prepare a formulary of the unofficial preparations in common use in that vicinity.

The local committee discharged the duty assigned to them creditably and so satisfactorily that the American Pharmaceutical Association determined to extend the scope of the work, and urge it upon the attention of the professions of medicine and pharmacy throughout the country.

The object aimed at in the preparation of the formulæ is to es-

tablish an authoritative standard for these preparations so that wherever made, or by whomsoever compounded, they may be of uniform strength and quality, and to relieve the pharmacists, especially in the large cities, of the necessity of carrying in stock several brands of what is intended to be the same preparation.

So far as we are able to judge, the committee have discharged faithfully and well the duty imposed upon them by the Association. The success of the endeavor depends upon the cooperation of the medical profession with the pharmacists, which doubtless will be secured to a considerable extent. It is not to be expected, however, that this book of formulæ will entirely do away with the specifying of particular brands of these unofficial preparations, any more than the precise rules in the pharmacopeia have done away with the necessity for ordering special brands of chloroform, or of fluid extract of ergot, or of some of the alkaloids, when we desire safety and certainty of therapeutic action.

So far as results prove satisfactory we would urge the members of our profession to prescribe in accordance with the National Formulary, but when either in efficiency or palatability special brands of either official or unofficial preparations are found to be notably superior to those of the "N. F.," our patients should be accorded the advantage.

We would suggest to the Committee of Publication of the American Pharmaceutical Association the use of the word *unofficial* instead of *unofficial* on the title page, as it is correctly used in the preface.

AN EXPERIMENTAL CONTRIBUTION TO INTESTINAL SURGERY, with Special Reference to the Treatment of Intestinal Obstruction. By NICHOLAS SENN, M. D., etc.

This valuable monograph, which Dr. Senn presented at the International Congress last year was first published in the *Annals of Surgery* during the first half of this year. It has been published now in pamphlet form and thus constitutes a valuable addition to the surgical literature of the day. It was regarded as one of the most valuable papers presented to the Congress, and is a credit to the American profession.

THE SURGICAL DISEASES OF THE GENITO-URINARY ORGANS INCLUDING SYPHILIS. By E. L. KEYES, A. M., M. D., etc. New York, D. Appleton & Co., 1888. 8vo., pp. 704, cloth, \$5.00. (St. Louis, J. L. Boland, J. H. Chambers & Co.)

The progress made in surgery during the last ten years, the changes of practice by the best surgeons with regard to several operative procedures, notably litholapaxy, suprapubic cystotomy and operations upon the kidney itself, and other matters as well, rendered necessary a thorough revision of the work published some years ago as the joint production of Drs. Van Buren and Keyes. Much of the work has been rewritten entirely. There is a large amount of entirely new matter presented in this volume to make room for which the reports of cases given in the former work are all omitted in this.

The work in its present form stands fairly abreast of the latest advances in genito-urinary surgery. Dr. Keyes says of the book that it is an honest exhibit of his views upon all the subjects considered, and in view of his wide experience and unquestioned skill, we commend his book to the notice and study of all who work in this field.

THE ETHICS OF MARRIAGE. By H. S. POMEROY, M. D., with a Prefatory Note by THOMAS ADDIS EMMET, M. D., LL. D., and an introduction by REV. J. T. DURYEA, D. D. Funk & Wagnalls, New York and London, 1888. 12mo.; 197, cloth.

This little volume is a strong, well written plea for better and purer home life. The destruction of unborn human life the author believes to be "*par excellence the American sin,*" and he endeavors in this volume to exert what influence one man can to right this great wrong which he feels is the great danger of our American civilization.

Recognizing that in many cases wrong-doing is the result of ignorance, he urges the importance of imparting the truth to every youth on the threshold of maturity in regard to the character of the functions of their various organs, and the laws which govern their exercise.

The tone of the book is pure and elevating. The dangers which it aims to avert are not exaggerated nor overdrawn. It is a work to which we are glad to call the attention of our readers as being one which may wisely be placed in the hands of both married and single, in fact of all who have or may have upon them the responsibilities of married life. The author has treated the subject forcibly, truthfully and with admirable discretion.

MEDICAL PUBLICATIONS. Harvard Medical School, 1887. 8vo.

This little volume of some 200 pages consists of a number of papers, all of which, we believe, have appeared in the medical journals during the year. The object of presenting them in this form, as set forth in the preface, is "to show the character of the original work done by the instructors of the [Harvard Medical] school, or under their personal supervision, during the year." The showing is a very creditable one.

AYS ON HYSTERIA. BRAIN TUMOR AND SOME OTHER CASES OF NERVOUS DISEASE. By MARY PUTNAM JACOBI, M. D., etc. New York and London; G. P. Putnam's Sons, 1888. 8vo., pp. 216, cloth. (St. Louis, J. L. Boland, J. H. Chambers & Co.)

The several essays which compose this volume have been read before medical societies or published in various medical journals heretofore. They are papers of interest and value, and are written carefully, as are all papers from the author's pen. The two papers which give the title to the book are the most extensive and noteworthy of the contents.

THE PATHOLOGY, DIAGNOSIS AND TREATMENT OF THE DISEASES OF WOMEN. By GRAILY HEWITT, M. D., London, etc.; edited with notes and additions by H. MARION-SIMS, M. D., New York, 3 vols., New York, E. B. Treat, 1887. Small 8vo., pp. 1040; cloth, \$2.75 per vol.

This is a reproduction of the same work which was published in 1883 by Bermingham with two short additions to the appendix. Dr. Hewitt is one of the leading men of the present day in England and his views of uterine pathology have had much influence with the profession, though probably very few now accept fully his ideas of the mechanical causation of uterine diseases or rely so far as he does upon support by pessaries for their relief.

The book is a standard and we have no hesitation in commending it to our readers.

BOOKS AND PAMPHLETS RECEIVED.

PAMPHLETS AND REPRINTS.—Malignant Edema and Fat Embolism, by L. Bremer (Am. Jour. Med. Sci., June, 1888).—Annual Report of the Department of the Insane of the Pennsylvania Hospital for the year ending fourth month, 21st, 1888. Philadelphia Press of Friends' Printing House, 1888, 8vo., pp. 43, paper.—New Method of Treatment of

Vegetable Parasitic Diseases of the Skin, by Henry J. Reynolds, M. D. —Transactions of the Massachusetts Medico-Legal Society. Vol. No. 10, 1887. Boston, Cupples & Hurd. 8vo., pp. 379-397, paper.—Forty-eighth Annual Catalogue and Announcement of the Missouri Medical College. 1888-9.—Conservatism in Gynecology, by A. Reeves Jackson, M. D. (Chic. Med. Jour. and Ex.)—Fourteenth Annual Announcement of the Medical Department University of Tennessee, Nashville Medical College.—Food Laws, by Henry Leffmann, M. D. Read before the Medical Jurisprudence Society of Philadelphia, May 13, '88. Philadelphia, published by the society.—Cocaine Dosage and Cocaine Addiction (Lancet, May 23, '87), Cocaine Toxemia (La Tribune Médicale, Jan. 1, '88), by J. B. Mattison, M. D., 16mo., pp. 44, paper.—Thirteenth Annual Announcement and Catalogue of Meharry Medical Department, Central Tennessee College, Nashville, Tenn., 1887-1888.—Woman's Medical College of the New York Infirmary. Twentieth Annual Catalogue and Announcement, June, 1888.—Weekly Abstract of Sanitary Reports U. S. M. H. Service. Report on Quarantine near New Orleans.—Sixty-fourth annual Announcement of the Jefferson Medical College of Philadelphia. Session of 1888-9.—Sechster Jahrsbericht des Deutschen Samariten Vereins zu Kiel, '87-88.—Experimental Contribution to Intestinal Surgery, with Special Reference to the Treatment of Intestinal Obstruction, by Nicholas Senn, M. D. (Annals of Surgery, January to June, 1888.)

CAUSATION AND PREVENTION OF PNEUMONIA.—A pamphlet on the Causation of Pneumonia, by Dr. Henry B. Baker, is being distributed by the Michigan State Board of Health. It is an 85 page pamphlet, and is a compilation of statistics collected by the State Board of Health, relating to pneumonia in Michigan and in other parts of the world. It is a thorough consideration of the subject, and seems to prove that pneumonia is controlled by temperature and humidity of the air. The pneumonia increases after the atmosphere is cold and dry, and decreases after the air is warm and moist. One would suppose that such climatic causes could not be controlled, but Dr. Baker points out how he thinks the disease may be greatly lessened by controlling the temperature and especially by moistening all air which requires to be warmed in all buildings public and private. During the time of greatest danger from the disease (cold weather) most people spend half their time in buildings where such conditions can be controlled, and Dr. Baker claims that it is the long continued exposure that causes this disease, so that, if the indoor conditions are properly cared for, this disease will be greatly lessened.

FOREIGN CORRESPONDENCE.

NEW YORK LETTER.

BADENWEILER, GERMANY,

July 25, 1888.

EDITOR COURIER.—It may seem somewhat paradoxical to have a New York letter from the heart of the Black Forest, but it must be remembered that in the summer heat New York spreads itself over the greater portion of the known world and from the appearance of the hotel register and the streets of London and Paris these cities are now more like New York than New York itself. Among the thousands of our countrymen who seek health, recreation, pleasure, or educational advantages on this side of the globe are to be found not a few of our own profession. Every steamer brings its proportion of medical men. There is the specialist who has made his regular summer trip across the ferry ever since he first tasted the sweets of life abroad as a student in Vienna or Paris, and on the same steamer are two or three men just through their hospital service, one going to Strasburg to study pathology, another to Vienna to learn dermatology from Kaposi, Neumann and the younger Hebra, and the third to study gynecology under Hegar in the Freiburg University. One man whom I met from Baltimore, was on his way to Vienna to devote himself to surgery for a year. There is much to be seen in Billroth's clinic, and excellent courses are given in operative surgery upon the cadaver in this justly proud city on the beautiful, though scarcely "blue," Danube. Still we are not slow in surgical matters at home, and I am inclined to think that the time has about come when a man can learn surgery in our own larger medical centres, if he be inclined, and goes about it in the right way. Before I left New York I saw in several of our hospitals as skilfully performed operations, under as careful anti-septic precautions and, which is the important point, followed by

as favorable results as any I have met with here, or should hope to find. To be sure further practical experience than one gets while interne in a hospital is not easily obtained in America. Plenty of operations are to be seen, and "you can look but you must not touch" unless you can form some favorable association with the operating surgeon. The same is true of Europe, but here such association is more easily effected, and besides there are in European cities special operating courses to be had which do not exist at all in America. A friend of mine from New York has been enjoying the advantages of Hegar's clinic in Freiburg for some time as an assistant, thus obtaining a more intimate knowledge of his methods than would be possible from the benches. Hegar does a laparotomy almost every day, operating always in the morning about seven o'clock. The utmost cleanliness and care on the part of all present is insisted upon. Hands are first scrubbed and brushed with soap, then in permanganate, alcohol is then poured over them, and finally a carbolic solution is used. One day recently he postponed an operation because his first assistant had a fever sore upon the lip. Sneezing or coughing in the operating room is forbidden. I had a very pleasant acquaintance with Professor Bäumler the prosecutor of the University of Freiburg, who is well known by his writings in America, although for the past two years he has written but little. At the Congress of Physicians of the Upper Rhine which was held in Freiburg this month, beginning with the 19th, Bäumler read a paper upon the subject of prophylaxis in scarlet fever. He claims that the period of danger from infection, as laid down by the French Academy at six weeks, is not long enough in many cases, and that from sixty to eighty days must elapse at times before the patient can be regarded as free from danger to others. He insists upon rigid disinfection, absolute isolation, and careful after-disinfection of clothing, bedding, etc., as the best prophylactic measures.

Kraske, who is at the head of the surgical clinic, spoke upon injuries of the urethra. His views are much the same as those of our honored Keyes. In accidental injuries of the perineum with bloody urine he urges immediate incision to prevent urinary infiltration and its subsequent dangers. If the torn ends of the canal can be caught up and sutured, well and good: if not, the wound is kept open and drained. The surgeon, some of the work of whose service I had the pleasure of seeing, treats chronic and obstinate

ulcers of the leg in a somewhat original manner. The surface of the ulcer is first prepared by scraping with a sharp spoon until all flabby or indolent granulations or indurated tissue is removed and a fresh surface left. Very thin strips of skin are then removed with a razor from the patient's body and applied to this raw surface. The ulcers thus treated, it is claimed, do better than after transplantation or skin grafting in the usual manner and the wound made by the razor quickly heals under an antiseptic dressing, as little more than the epidermis has been shaved off.

Freiburg has 392 medical students this year, and among them are found a few from the United States. Two well known practitioners of Fond du Lac are putting in their time to good advantage. Living is cheap here, the country surrounding Freiburg is most charming, and as the opportunities for medical study are excellent I have no doubt more of those who come to Europe for that purpose will find their way here. The advantages offered on this side of the water for general education are appreciated by some of our American physicians. Going up the Rhine from Cologne I met Professor Bowditch under whose kindly instruction I obtained my first knowledge of physiology in the Harvard Medical School. He was on his way to Dresden with a very interesting family of six children who will spend the next two years at school in that delightful city.

BADENWEILER.

Unless your readers are wiser than I was before I came here, they will ask where and what is Badenweiler? Of course we all know the other Badens. *Bad* means a bath, and the name has been given to innumerable bathing places, many of which are not half so bad as the name would imply. Weisbaden, Baden in Switzerland, Baden near Vienna, and the emphatic Baden-Baden are all well-known resorts for Americans. Then we have the Franzensbad and Marienbad alkaline iron waters so much thought of, and Wildbad and Teplitzbad and Ragatz thermal springs resorted to by rheumatics, and Carlsbad furnishing perhaps the best known alkaline saline waters for certain diseases of the liver, and the abdominal organs, and Wildungen whose earthy waters are so efficacious in catarrhal diseases of the bladder, gravel and prostatic diseases. All of these resorts have been described and written about over and over again, but here is a bath which will not be found in Gutmann's "Watering Places," and still it is

one which has much to recommend it. The Germans were apt to call any bath or natural thermal spring located in the woods and mountains with wild surroundings Wildbad, but as this spring was found in a small hamlet in the hills it was called Badenweiler. In the days when the Romans possessed this part of the world Badenweiler was a great bathing resort under the name of *Aque Villarum*, but the place became a ruin and was forgotten, and it was only in 1784 that the remains of one of the most important Roman baths now known of were accidentally discovered. Inscriptions show that the baths were dedicated to Diana, and an altar still stands to her honor. The arrangement of the various apartments, like those of the ruins of the baths at Pompeii, is readily seen in the *atrium*, *vestibulum*, *frigidarium*, *tepidarium*, *unctorium*, etc. There are also dressing rooms, separate baths, sweating baths, and all the comforts of a first class Roman bath. The bath is a double one, each compartment being duplicated, which would indicate that the ladies bathed alone and not in common with the men as in some modern baths. In Buda-Pesth I saw men, women, boys, and girls, all in the same large basin of an old bath built by the Turks. Those who were very modest wore a towel or slight garment about the waist. A curious feature of this old sulphur bath was the sight of leechers and cuppers plying their trade upon the stone steps of the basin, the patient going into the hot water to encourage the flow of blood.

It is probable that the baths at Badenweiler were built in the second century. Some have attributed them to Hadrian and some to Caracalla the extensive ruins of whose baths at Rome will be recalled by all who have been fortunate enough to visit this city of ruined greatness. In 1875 a beautiful enclosed marble swimming bath was built here near the Roman bath, and an equally large open air bath, so that, as of old, men and women could bathe at the same time in separate basins. There are showers, douches, sprays and complete arrangements for comfort. The Romans showed rare taste in choosing beauty spots for their health and pleasure resorts. As I write, I look down from my window across the broad and fertile valley of the Rhine to the Vosges, and did not these beautiful peaks stand as a barrier between the two unfriendly neighbors, I could look on and on into la belle France. The water of the Badenweiler Springs is almost devoid of chemical ingredients to which their beneficial action can be attributed: it

is slightly alkaline, and pours from the spring above the bath at the rate of 1140 litres per minute, and has a temperature of about 80°. It is a peculiarly pleasant water to swim and bathe in for one who is not sick, as I can attest; and I am told by Dr. Ott, one of the bath physicians, that in cases of neurasthenia, nervous prostration, excitability, neuralgias, nervous dyspepsia and in fact all neuroses, its use is followed by the happiest results. Of course the climate has much to do with the benefit in these cases, for this must be one of the most sedative and quieting regions in this part of the world. The air is cool, dry, and laden with the odors of pine and balsam bearing trees. The higher peaks of the Schwarzwald shut in the town from the north, east, and partly from the south, while it is open toward the Vosges mountains on the west. Sharp and raw winds are unknown, it is claimed, and although it has been a very rainy season so far, the ground dries quickly and even in the woods unpleasant dampness is not felt. The temperature is even, and the night air much the same as that of the day. The climate is thus very favorable for throat and lung diseases, and many cases of chronic bronchitis are now here. Phthysical patients, in the first or second stage, do well, and some stop here for a season on their way to more southern resorts. Some too are here stamped with that death seal with which the last stage of the disease marks its victim, but such cases, of course, have here as elsewhere little to hope for.

The natives show in their faces the healthy nature of the region, and nowhere, so far as I have traveled on this side of the water, do the women have such rosy cheeks and general appearance of good health. Epidemics of any serious maladies are unknown, they never have any intermittent fever, and the mortality exclusive of the first year of life is only 13.8 per thousand. The whey cure is an important addition to the climate and baths, and milk is a favorite beverage, many drinking it fresh from the cow. The milk here, differing from that we are accustomed to in New York, is never watered excepting as the cows have been taught to water it themselves. I saw a small herd of them drinking copiously of the excellent spring water which supplies the town, just before milking time the other day.

One of the many pleasant walks is that up to the ruins of an old castle originally built by the Romans to protect the baths, and rebuilt about the end of the eleventh century, after which it was for

many years in the possession of the Dukes of Zähringen. In 1678 it was destroyed by the French. The ivy covered walls are picturesque, and a grand view is obtained from their tops, but of course the ruins do not compare in any way with those of Heidelberg where I spent several days on my way here, Heidelberg, that most interesting of the German seats of learning, where every corps student has an hypertrophic or keloidal scar across the cheek or else a fresh cut just plastered up. When I was there ten years ago there were so many duels overdue, but over nothing more important, they had to stay late into vacation time to fight them out, and the same state of affairs seems to exist this year. In Freiburg I found the students had one or more duels on the docket for each day, and an unscarred face is a marked exception among those who wear the caps. Professor Kraske has some six or seven assistants at his clinic: they are all handsome fellows, polite and affable, but several of them were what we would call disfigured. They, however, no doubt, take pride in the scars, which show the world that they did not flinch before an adversary's sword, any more than they would shrink from any duties or dangers of after life. Perhaps when they come to America to practice (they all do) they will be glad to submit to some American plastic surgery for cosmetic effect.

Speaking of the number of physicians from this country who come across to us, and discourage the recent graduate from our own schools by getting into a paying practice the first year, would it not be well to have a little protection for American products in this matter if in no other. We can not practice here at will, and a good rule like a good compound emetico-cathartic pill should be able to work both ways.

INTUBATION

has not made very great advance here yet. It was mentioned in a lecture at Freiburg in a vague sort of way as an operation which had come from America, and Dr. Rehn, of Frankfort was named as one who had had considerable experience with the procedure. I subsequently met Dr. Rehn, who told me he was much pleased with intubation. He had operated upon eighteen children, and six had recovered while one had died after the operation from pneumonia, and a second was found to have had the tube inserted into the esophagus by an assistant.

Badenweiler is not far from Freiburg, and is one of the most

charming of small watering places. While possessing all the pleasant features of more pretentious baths, such as good orchestra, cur-house, reading room and library, park, numerous shady walks, excellent hotels and restaurants, there is nothing of a noisy or exciting nature, and I know of no better place for worn and weary nerves.

Yours truly,

CHARLES W. ALLEN, M. D.

MAGNESIUM SALICYLATE is a new antiseptic introduced by Huchard. It is met with in the form of long, colorless needles, has a bitter taste, and is freely soluble in water and alcohol. It has been highly recommended in abdominal typhus as a superior substitute for salicylate of bismuth; being less astringent and constipating than the latter, it may be administered in large doses without causing any symptoms of intolerance or toxicity, and is not followed by ill after-effects. Huchard speaks of salicylate of magnesium as having rendered him wonderful services in the treatment of typhoid fever; the ataxic symptoms disappeared, the fetor of the breath vanished, the distended abdomen was diminished in size, and the foul odor of the stools was banished. He believes that the death rate from ileo-typhus can be greatly lessened by the employment of salicylate of magnesium: The dose may be fixed at 10-15 grains, three times daily.—*Notes on New Remedies*, July.

DIET TABLES.—Reed and Carnrick have published and present to the medical profession an excellent series of diet tables for various diseases, in many of which the judicious regulation of the diet is the most important factor in successful treatment. It will be a great aid to the physician to have these printed diet tables, which may be readily adapted to any individual case and will save much time and trouble to the physician and be a decided advantage to the patient. These tables may be obtained without charge by addressing Reed and Carnrick, New York, N. Y.

THE BOSTON MEDICAL LIBRARY has been mentioned in a will recently written with a bequest of \$10,000.

REPORTS ON PROGRESS.

OBSTETRICS AND GYNECOLOGY.

The Use of the Vaginal Tampon.—T. A. EMMETT, in a paper read before the Alumni Association of the Woman's Hospital, New York, discussed at length the use of the vaginal tampon in the treatment of certain effects following pelvic inflammations.

As to the time when this treatment is applicable and the indications which it meets, Dr. Emmett says:

"The use of hot-water injections is invaluable in the treatment of all stages of inflammation involving the cellular or connective tissue of the pelvis, in lymphangitis, in phlebitis, and in the early stages of pelvic peritonitis. On the other hand, the vaginal tampon in my experience has only been beneficial after all acute symptoms have subsided. If this one feature is not recognized as a cardinal point, the indiscriminate use of this means of treatment will always be attended by unsatisfactory results, and with much unnecessary suffering to the patient.

"The only class of cases in the treatment of which I have derived any special benefit from the use of the vaginal tampon has been where I have supposed the blood vessels had degenerated into a varicose condition, and where this state of the veins has been brought about from the effects of local peritonitis with adhesions, from the loss of the connective tissue, and from injury where the fascia has been involved.

"Its use can accomplish no good but may do much harm, so long as any inflammatory symptoms can be detected. We must trust to the thermometer to show the absence of an elevated temperature in the pelvis, and to the want of other symptoms indicative of existing inflammation. In the absence of other symptoms we must exclude to a great extent the presence of pain on pressure as an evidence of active inflammation, its chief value then being but an indication of the manner in which the tampon should be applied.

"Where the adhesions have formed and the natural elasticity of the tissues has been impaired, the introduction of the speculum, or pressure made with the finger at certain points, must give rise to more or less pain. Traction is thus made through the connective tissue on the peritoneum and along some shortened line of adhesion.

"But we are to be all the more careful when pain does exist under these circumstances, through fear of setting up a fresh attack of peritonitis. * * * The tampon does positive harm when not indicated, acting as a source of irritation so long as any acute inflammation exists, and it does not lessen the circulation through the arteries, as their coats are not sufficiently compressible."

Concerning the *modus operandi* of the tampon he says:

"We therefore can draw but one conclusion, that the tampon acts mechanically, by compressing the dilated veins and by lifting the uterus to its natural position in the pelvis, so that the circulation between the arteries and veins may be equalized. If the floor of the pelvis has been injured in child-birth, one or both agents may have to be employed to prepare the woman for the needed surgical operation. And it is only by the proper execution of this operation that we can restore the fascia and connective tissue in the pelvis to a state of integrity, and thus indirectly give support to the vessels.

"But we have a different condition to deal with in treating the effects of a local peritonitis. As soon as the adhesions have been separated by the steady pressure of the tampon, the pelvic tissues begin to regain their tone. And as the prolapse is corrected by the use of the tampon, and the uterus is steadily maintained in its natural position, the smaller vessels are able to regain their natural and tortuous course with the improved condition of the connective tissue. So far in the treatment of a case the use of the tampon is most satisfactory, but as we advance the progress becomes slower. We have at last reached the point where the permanency of our previous success in the treatment of the case must rest upon our being able to effect a radical change in the degenerated venous diverticula. But it is just in this condition where I believe we gain the chief advantage in the use of the vaginal tampon. We should not, however, be misled by expecting too much, and we must realize that we can only gain permanent good through use of the agent after a long and tedious application, which may extend

over the course of months. Moreover, the patient must be, as a rule, favorably situated in a hospital for receiving the treatment, and the operator is only able to do full justice to the patient in proportion to his experience.

"I am unable to understand how anything is accomplished unless these diverticula are destroyed through the long, steady and uniform pressure which is maintained by the tampon when properly applied. It is impossible to suppose that these degenerated vessels ever could regain their tone. A certain amount of shrinkage doubtless takes place after they have been for a long time kept from being overdilated. But the continued pressure exerted by the tampon is but the application of a principle which has long been employed in general surgery. It is reasonable to suppose, therefore, that the contents of these vessels become gradually organized, more or less adhesive inflammation is excited by the pressure, and eventually the tract throughout is obliterated."

He presents the following practical suggestions as to the best mode of proceeding in the use of the tampon.

Regarding the materials to be used he found after trial of various substances "that the best material was the cleanest quality of cotton wool as sold in the shops and put up in rolls. "For the tampon I prepared a number of pieces of cotton of about the width and thickness of four fingers. I then made a ball of each by turning the four corners or edges together, and while grasping these I thoroughly smeared the outer surface with vaseline. Each ball was then about the size of an English walnut, and kept its shape as it was packed loosely in a tin box for use. It was found advisable to have these balls of cotton as nearly uniform as possible and of about the size that I have indicated.

"On beginning the operation it is sometimes necessary to place the patient on the knees and chest before the uterus can be replaced. Then several balls are to be introduced and placed at a point where the uterus can be held by means of the finger while the patient is turning upon her back. One ball of cotton after another should be placed in the vagina and passed closely along the index finger of the other hand which is engaged in pressing back the perineum and in holding up the uterus or that portion of the tampon already introduced.

"If one part of the vagina is more sensitive than the other we must learn to "humor" it by making less direct pressure until tol-

erance becomes established. When the sensitiveness is situated in the neighborhood of one of the broad ligaments we must pack the cotton on the opposite side of the cervix to act as a crutch. If the inflammation is chiefly about the utero sacral ligaments, it is easy to tampon so that the uterus will be lifted without making direct pressure. The tampon should be placed so as to make as little direct pressure to the left as possible along the course of the rectum. After the introduction of a sufficient amount of cotton we are to pass the index finger carefully over every portion to be certain that it is uniformly placed and to smooth down the entire surface. When this "finishing off" is properly done it is possible, from the coherency of the cotton and vaseline, to pack but a portion of the vagina. It may be but the upper part, or to one side, and it is likely to remain in position.

There are two practical points in the application which, if not carried out carefully, will cause our efforts to miscarry. The first is to keep the uterus, throughout the whole course of treatment, as nearly as possible in its natural position and at the same time in the pelvis. The other is to place the fresh tampon without delay after the other has been removed. I have been in the habit of renewing the tampon daily for the patients in my private hospital. But if it could be kept deodorized, the longer it remained undisturbed the more thoroughly would both these conditions be met with in practice.

The best instrument for removing the cotton is a piece of whale-bone with a rough screw cut in the end, a simple device, for the application of which we are indebted to the late Dr. Sims. This is easily passed alongside of the finger and twisted into one position after another. It is well to leave that part directly under the uterus until the last, so that the finger may be slipped beneath the cervix, at the proper moment, to hold it in place until the fresh tampon can be introduced. To facilitate this, everything should be prepared beforehand. It is very evident if the uterus is allowed to prolapse, that just in proportion as it does so the circulation must be disturbed, and if there is any advantage to be gained from maintaining a steady and uniform pressure, it must be as nearly as possible, a continuous one. Therefore there should be no unnecessary delay in returning the tampon, as the blood begins again to rapidly dilate the vessels as soon as the pressure is removed.

A serious drawback to the satisfactory progress to be gained by

this mode of treatment is the recurrence of the menstrual period, when the use of the tampon has to be discontinued. Just before this period is expected I remove the tampon and immediately introduce a rubber ring of a sufficient size to admit of the introduction of the finger between it and the vaginal wall at any point. These rings are about three-quarters of an inch in diameter, and so long as the patient remains in a recumbent position their broad surface offers a fair substitute for the tampon both in exerting a direct pressure upon the larger vessels and by taking up the slack in the pelvic tissues. As soon as the flow has ceased I have a large hot-water vaginal injection administered and then employ the tampon as before in the continued treatment of the case.—*N. Y. Med. Jour.*, Feb., 1888.

Protecting the Perineum.—DR. W. V. M. TAYLOR says that by placing the thumb and forefinger or even the points of all the fingers behind the anus, at or near the tip of the coccyx and pressing against the brow of the child, pushing it toward the pubes, while the other hand supports the head to prevent too rapid descent, the accoucheur has complete control of the labor, and there is no danger of injury to mother or child, and that by maintaining the perineum on a gentle continuous tension, dilatation is much more easily effected than when there is an alternation of extreme tension and complete relaxation.—*Med. Record*, Feb. 18, 1888.

Use of the Curette for Hemorrhage due to Uterine Fibroids.—HENRY C. COE discusses at some length the subject of curetting the endometrium in cases of profuse uterine hemorrhage due to the presence of fibroids. As the result of his studies and practice he reaches the following conclusions:

1. The hemorrhage in cases of fibroid tumor of the uterus has its source, not in the tumor itself, but in the hypertrophied endometrium.

2. The hemorrhage is not directly proportionate to the size of the tumor, but to the extent of the mucous surface. Venous obstruction and the menstrual congestion in the mucosa are the chief active causes.

3. In certain cases the hemorrhage can be diminished for a considerable period by thoroughly scraping away the hypertrophied endometrium and repeating the operation as often as may be necessary to keep the menorrhagia under control.

4. Curetting is merely a palliative measure, but it may enable the patient to survive until she is relieved at the menopause, whereas radical operations too often result fatally.

5. Curetting in these cases should be regarded as an experiment, which, however, is so harmless and so frequently successful, that we are justified in giving it a fair trial before advising oöphorectomy, myomotomy, or supra-vaginal amputation.

6. The use of the curette requires no special skill. It is an operation for the general practitioner, and is much more rational than to allow the patient to become exhausted by repeated hemorrhages which medication and other palliative measures are powerless to control.—*Med. Rec.*, Jan. 28, 1888.

Chloride of Ammonium and Hypodermic Injections of Phosphate of Soda in the Treatment of Chronic Pelvi-Peritonitis.—M. J. CHERON relying on the stimulating action upon the nutrition of these salts employs them as follows:

R	Ammonii chloridi,	- - - -	50 grammes (℥iss.)
	Syrupi simplicis,	- - - -	500 " (℥xvj.)
M. Sig. One to five desertspoonfuls a day at meal times.			
R	Sodii phosphatis cryst,	- - - -	6 grammes (℥iss.)
	Sodic sulphatis,	- - - -	6 " (℥iss.)
	Aquæ destillatæ,	- - - -	120 " (oz. iv.)

Solution fresh and carefully filtered.—Inject very slowly and knead the part a little. Repeat every six or eight hours.—*Rev. Méd. chir. des mal des femmes*, Dec. '87; *L'Union Méd.*, Feb. 19, 1888.

This would seem in our country to be rather heroic use of the hypodermic needle and the subcutaneous connective tissue, to inject four fluid ounces of a solution at one time.—[Rep.]

DISEASES OF THE NERVOUS SYSTEM.

BY FRANK R. FRY, A. M., M. D.

A Peculiar Effect of Antipyrin is reported by EMORY LANPHEAR, M. D., Kansas City. Mrs. C—, æt. 52, has been under my care for two or three years, having first come under my observation when suffering from dementia, following the menopause.

She has tertiary syphilis, and for some weeks took as high as 400 grains daily of iodide of potassium. For some months she had perfect immunity from all troubles, except an occasional attack of dyspnea, probably due to aortic stenosis, the latter condition being quite marked; but finally the old pains returned in the tibiæ and ulnæ, at last becoming so severe as to render sleep impossible. She had for a time received much comfort from the refilling of a prescription containing salicylate of soda and oil of gaultheria.

But it ceased to have any effect in controlling the pain after a few days. While waiting to receive relief from specific treatment, I had to give something to relieve her pain. She had once been addicted to the morphine habit, so I had to find something else. After exhausting the usual drugs—bromides, cannabis Indica, hyoscyamus, etc., I gave her

R Antipyrin, . ℥vj
Div. in pulveres vi.

Sig. One every two or three hours until relieved.

Inadvertently I omitted my usual note at the bottom of such a prescription, "Not to be refilled," and, being compelled to miss visits to her for several days, I found that she had had the same prescription refilled some four or five times in as many days. She had thus taken nearly or quite one and one-half ounces of antipyrin inside of a week, and had virtually become a subject of the "antipyrin habit." Possibly, had there been no organic lesion of the heart, no distressing symptom would have arisen; but, as it was, she was purple, her lips swollen and black, and her face and extremities "puffed up" to an amazing extent. The drug had ceased to have any analgesic effect. It was discontinued. She was placed upon digitalis and quinine (having a temperature of 100° F.), and in a day or two was in a normal condition.

That this extraordinary effect (she having never been thus affected previously) was due to antipyrin was demonstrated to my satisfaction by this fact: She again resorted to the same drug in a few days, during my absence, and was soon in the same alarming state, from which she promptly recovered upon withdrawal of the drug and the substitution of digitalis and quinine, as before.—*Kansas City Med. Index.*

Ophthalmoplegia Externa Partialis.—Under this head, DR. M. ALLEN STARR, of New York, discusses the important points and

significance of paralysis, limited to one or more of the muscles of the eye:

The condition of paralysis of all the muscles moving the eyeball, *ophthalmoplegia externa totalis*, is well known and easily recognized. Its lesion consists of a general destructive process of a sub-acute inflammatory or degenerative nature in the nuclei of origin of the sixth, fourth and third nerves upon the floor of the fourth ventricle and aqueduct of Sylvius. It is always bilateral. The destruction of the sixth nerve nucleus on either side causes a paralysis of conjugate movement of both eyes toward the side of the lesion; and when both sixth nerve nuclei are involved together, the eyes look directly inward and can not be turned from side to side. The destruction of the fourth nerve nuclei produces a paralysis of the act of looking upward and inward; and that of the third nerve nuclei deprives the patient of all other movements of the eyeball and upper lid, so that in the terminal stage of this disease double ptosis and immobility of both eyeballs are present. The motions of the iris are, however, unaffected in this disease, and the nuclei governing the movements are not involved in the degenerative process, though they lie quite near to and just in front of those governing the other muscles supplied by the third nerve.

It is not to total ophthalmoplegia externa that I desire to call attention in this paper, but to a condition of paralysis of but one or two of the muscles moving the eyeball, a condition which may be termed *ophthalmoplegia externa partialis* to distinguish it from the condition already described.

The chief interest in these cases lies in the fact that they aid us in the localization of the oculo-motor nerve nuclei.

It is well known that by experimental irritation of the floor of the aqueduct of Sylvius in dogs, Hansen and Voelckers claimed to have located in rabbits the nuclei governing the various functions of the third nerve in the following order from before backward:

Ciliary muscle, accommodation.

Sphincter iridis, light reflex.

Rectus internus.

Rectus superior.

Levator palpebræ.

Rectus inferior.

Obliquus inferior.

If, however, the cases upon record of paralysis of individual

muscles in combination be considered, it is evident at once that this order of the nuclei cannot be the one which obtains in man. It may be admitted, however, that the centres governing the movements of the iris do lie anterior to all the others. For Westphal has recently published a case in which all the nuclei governing the motions of the eyeball were destroyed, but in which two nuclei lying in the floor of the aqueduct of Sylvius near to its opening into the third ventricle were found intact. And to these nuclei he assigns the function of governing the motions of the pupil which were preserved in his case. And a complementary case has recently been recorded by Bernhardt, in which the action of the pupils in light and accommodation was permanently lost, with only temporary affection of any of the other muscles.

Cases reported by Leube, Bernhardt, Thomsen and Steffen indicate that the centre governing the levator palpebræ lies next in order to the centres for the iris.

Therefore, in any case in which the muscles moving the eyeball are involved, it may be possible to locate the lesion. If the iris alone is affected, the lesion is small, and lies either in the ciliary ganglion in the orbit, or just at the opening of the aqueduct of Sylvius into the third ventricle. If all the muscles of the eyeball are affected together, the external rectus and superior obliquus, as well as those supplied by the third nerve, excluding the iris, the case is one of ophthalmoplegia externa totalis, and the lesion lies in the gray matter of the floor of the fourth ventricle and of the aqueduct of Sylvius. Both eyes are then involved. If all the muscles of the eyeball supplied by the third nerve are affected, including the iris, the case is one of total peripheral paralysis of the third nerve, and the lesion lies on the base of the brain, and may in time implicate other cranial nerves. One eye is usually alone affected.

If one or two of the muscles of the eyeball supplied by the third nerve are affected, others escaping, the lesion lies in the tegmentum of the crus cerebri, between the nuclei of origin and the point of exit of the third nerve. One eye or both may be affected, but both eyes are rarely affected in the same manner.

There is but one exception to the last conclusion, and that is in the case of post diphtheritic ocular paralysis, in which the peripheral branches of the third nerve are affected after the entrance of the nerve trunk into the orbit. And here the existence of a

diphtheria preceding the paralysis will establish the diagnosis.—*The Journal of Nervous and Mental Diseases*, May, 1888.

Forcible Feeding of the Insane.—In a discussion of this subject at a recent meeting of the Philadelphia Neurological Society, Dr. CHARLES K. MILLS is reported as follows:

He regarded the subject of the forcible feeding of the insane as one of great practical importance to general practitioners of medicine, as well as to those who had charge of the insane institutions. When he read in the *Medical and Surgical Reporter* the favorable editorial comments on Dr. Rader's paper, advocating non-interference when insane patients refused food, he felt that the subject would be an excellent one to bring before an association like the Philadelphia Neurological Society, which counts among its members neurologists, alienists and general physicians. He did not, however, feel that he could add much to the discussion; but he would like to emphasize the importance of forcibly feeding the insane who are treated at their homes, or not in institutions especially intended for such patients. He saw many cases of insanity in consultation, and was frequently called upon to treat such patients at their homes, either alone or in connection with other physicians. He could recall a number of cases of acute mania, melancholia, delusional monomania, and stuporous dementia, in which he was confident that fatal results, or absolute failure to succeed in treatment at home, were due to carelessness or tardiness or indifference as regards forcible feeding. Occasionally cases of hysterical insanity will either intentionally, or in spite of themselves because of their morbid impulses, carry their refusal of food so far that their stomachs will not respond properly to the stimulus of food when given, and serious results will then ensue. He had under his charge for several years an intelligent young man, but the unfortunate victim of a form of paranoia, chiefly exhibiting itself in abulia, inchoate delusions, and imperative conceptions, nearly all circling about a fundamental delusive idea with reference to the sinfulness of having blood entering in any way into his food. This patient was fed 400 to 500 times forcibly with the esophageal tube in the course of about two years. Dr. Mills had but little doubt that his life was saved by the procedure; and not only so, but, as the patient himself had more than once declared, the forcible feeding had probably prevented him from passing into

a state of acute mania, great excitement having frequently resulted from the terrible conflict precipitated by the struggle between the desire to take food owing to pressing physical necessity, and the resistance to the inclination by which he was delusively dominated.

As to the methods of feeding by force, his experience was in favor of the nasal-tube. As this discussion was intended in publication to cover the subject of forcible feeding, he would close his remarks by quoting from his little book on the "Nursing and Care of the Nervous and the Insane," a few remarks on this subject of nasal feeding: "The number of patients who cannot be fed by the nose is very small; occasionally, however, a patient is found whom it seems impossible to feed in this way, owing to the choking and strangling produced. This may be because of some peculiar anatomical conformation, or some special idiosyncrasy on the part of the patient. Such a patient will choke or strangle with nasal feeding when he will not when the stomach-tube is resorted to. If, when the attempt is made to pass the well-oiled tube through the nostril, resistance is encountered, and if, after a few trials, the tube cannot be made to pass, great force should not be employed by the operator, but the tube should be at once withdrawn and the effort should be made to pass it through the other nostril. In nearly all cases where special resistance is offered on one side, the tube will pass with ease upon the other, and this, in most instances, is because, if hypertrophies or projections exist upon one side, there will be upon the other corresponding or compensating depressions and enlargements. Sometimes, but rarely, the mucous membrane is exceedingly irritable. After the nasal-tube has passed through the nostril, it seems to have a peculiar tendency in some cases to drop into the glottis, the patient struggling and attempting to scream meanwhile. Some patients will spit or force the tube out into the mouth; and attendants can sometimes through the mouth, keep the tube, which has been passed through the nose, in position. Occasionally the nose is made sore by the use of the tube, but this is not likely to occur if the tube is always perfectly cleaned and well oiled. If it is of the proper kind, that is, a soft tube, there will be no danger of injuring the parts by breaking or perforating the mucous membrane. In using the nasal tube, great care should be always exercised to see that at least fifteen to sixteen inches of the tube has been passed before beginning the feed-

ing. This will make it certain that the entrance to the windpipe has been passed. Of course care should be taken to observe that the tube has not doubled itself." He would add one remark, namely: Great care should be taken not to administer the food too hot. He knew of one accident occurring in this way.

The Diagnosis and Pathology of Syringomyelia.—At a meeting of the Verein Deutscher Aertze in Prague, held January 13, 1888, PROF. KOHLER made some remarks on syringomyelia.

The patient exhibited showed besides progressive muscular atrophy of both upper extremities, in course of development for three years, an affection of the skin, limited to the region of the shoulder and arm, consisting in numerous circumscribed spots of necrosis, with succeeding ulceration and keloid cicatrization; besides there exist defects of the temperature sense in both hands and on the left forearm, and upon both sides the oculo-pupillary symptoms of paralysis of the cervical sympathetic.

The preceding complexus of symptoms may depend on two conditions, that of a formation of a cavity dependent on dilatation of the central canal, and that of central glioma of the spinal marrow—the latter with or without the formation of a cavity and fissure.

Both of the processes mentioned, at the time, were not susceptible of differential diagnosis. The central seat of the changes and the preference with which the cervical cord is first attacked, are common to both. He made a searching analysis of the complexus of symptoms hitherto observed in the cases of syringomyelia referred to, and gives prominence to the following signs as of diagnostic significance by reason of their peculiarity, or their association: progressive muscular atrophy, peculiar disturbances of sensibility, peculiar analgesia and defects of the temperature sense, finally trophic disturbances of the skin and deeper parts. The last may appear as paronychia, leading to the loss or deformity of individual phalanges of the fingers, or as a deep seated phlegmonous inflammation. Or they may show themselves, as in the patient presented, upon the skin in the form of vesicles, which appear filled with serous or purulent contents, and change to protractedly suppurating ulcers, on which an indurated cicatrix is frequently to be found. Or, finally, there occur in the cases of such patients, spontaneous, or rather, upon slight cause, fractures. It is worthy of notice that any of the manifestations of the disease may appear

as the first symptom, and for a time exist alone. In the progress of the case regular combinations of various kinds occur, and, finally, depending on the extension of the process in the soft substance of the cord, spastic paresis and paraplegia of the lower extremities associate themselves.

Prof. Chiari spoke of the pathological anatomy of syringomyelia, a name at the present time generally applied to every protracted cavity formation in the spinal cord in adults. The individual cases, as a careful analysis of respective reports shows, are generically widely different.

Cavity formation in the spinal cord in adults may result from gliomatous degeneration, from the persistence and progressive development of congenital anomalies of the central canal, from local circulatory disturbances, from myelitic softening, and also from hyperplasia of the central connective tissue, with transudation into the previously normal central canal. Therefore all cavities associated with the central canal should be called hydromyelia, and the term syringomyelia be limited to cavities elsewhere in the cord.

At a recent meeting of the New York Neurological Society, Dr. M. ALLEN STARR spoke on the same subject as follows:

Syringomyelia is a condition of the spinal cord in which abnormal cavities are present within the organ. The cavities are of two kinds: First: a dilatation of the central canal—hydromyelia. Of this two specimens were shown, in each of which the cavity was easily seen by the naked eye, and the complete epithelial lining was visible under the microscope. The tissue around the dilated canal was normal. Secondly, a destruction of the elements of the spinal cord—syringomyelia. The first stage of its pathology is the infiltration of the spinal cord near the central canal with round cells, connective-tissue nuclei, or gliomatous cells. A specimen showing this condition was exhibited. The next stage is the production of a felt-like connective tissue with numerous nuclei through the spinal cord, but especially near the central gray substance, pushing aside or destroying the spinal elements. This gliomatous mass has a tendency to break down in its centre, leaving a fissure or cavity whose walls are formed by the felt-like connective tissue mass. The formation of such a cavity is the third stage of the pathological process.

MEDICINE.

BY L. T. STEVENS, M. D.

Chronic Rheumatic Laryngitis or Chronic Rheumatic Sore Throat.—DR. E. FLETCHER INGALLS, of Chicago, gives a general description of this affection of the throat, first brought to the notice of the profession in a paper presented by him to the Ninth International Medical Congress, held at Washington, 1887. It is an affection of quite frequent occurrence, and has doubtless existed from time immemorial; it is similar in some respects to that condition described under the name of neuralgia of the pharynx or larynx; and probably not a few cases, reported as examples of this latter affection, were of rheumatic origin. It is a painful affection, chronic in character, but varying much in severity from time to time, and attended by only slight physical changes in the parts involved. Usually some part of the larynx is involved; but as cases are met with in which other parts of the throat are affected to the exclusion of the larynx, the name chronic rheumatic sore-throat is the most appropriate. It occurs most frequently in men, is most common in the fall and spring months, though it is not infrequent in winter, and it occasionally persists through the summer. The patients have all been adults, varying in age anywhere from 25 to 60 years, and belong to all classes. That this disease is due to the same cause as rheumatism is proven by the facts that nearly all, if not all, patients have inherited or acquired the rheumatic diathesis, and are subject to rheumatic pains in other parts of the body; that these pains observe the same laws as the other rheumatic pains as to remission, intermission, or exacerbation with varying conditions of the weather; and that only those remedies and surroundings which have proven most useful in the treatment of rheumatism, seem in anyway influential in curing the disease. The affection may come on insidiously or suddenly, but has usually existed for some time before a physician is consulted. In most cases the general health is good. The patient complains of a localized pain and tender spot over the larynx or upper portions of the throat, and occasionally of pains radiating towards the ears and in other directions, as in neuralgia. The pain may be referred to the thyroid or cricoid cartilage. It may be experienced in the trachea, and it may or may not be aggravated by phonation or deglutition,

but it is *nearly always increased* by pressure. More commonly, however, the pain is referred to the cornua of the hyoid bone, and it is more frequent in the right than in the left side. It is occasionally referred to the tonsil, or to the sides of the tongue, or upper portion of the pharynx, but, during the course of the disease, it is apt to shift from place to place, however, being more intense in some of the localized spots just referred to. The disease presents no anatomical characteristics, but in most cases there are circumscribed spots of slight but changeable congestion and swelling. In every case the diagnosis must be based upon a careful study of the history and habits of the patient. It must be differentiated from varicose veins or enlarged glands at the base of the tongue; chronic follicular tonsillitis, or glossitis; syphilitic and tuberculous sore throat; neuralgia, tobacco sore-throat and cancer. The disease may continue for months or even years, though by appropriate treatment it may be cured in from 6 to 12 weeks. Considerable benefit is derived from local applications, (a spray consisting of morphia, gr. iv; carbolic acid and tannic acid, aa gr. xxx; glycerine and water, aa ʒiv, applied once only); but reliance must be placed upon those internal remedies which are indicated in rheumatism of other parts, among which the best results have been obtained by the author from the use of the extract of *phytolacca*, gr. iij or iv, three or four times daily.—*Med. Register*, June 9, 1888.

On the Local Treatment of Diseases of the Respiratory Apparatus.—DR. SCHREIBER in contributions to the *Zeitschrift f. Klinische Medizin*, after proving that the inhalation treatment has no local effect, and is not rational, goes on to show how this treatment may be transformed into a local one. The chief results of his combined methods of treatment are as follows:

1. The combined inhalation method.—Here one-sided compression of the thorax in conjunction with simultaneous inhalation of medicated vapor is directed more immediately against the seat of the disease, and thus made to have a local effect. This plan will be applicable to cases in which hitherto simple inhalation of pulverized or volatile substances has been resorted to—*e. g.*, in catarrh of the larger and smaller bronchi of the upper or lower lobe; further, in bronchiectasis, putrid bronchitis, chronic tubercular processes, in abscesses or gangrene.

2. One-sided compression of the thorax.—This takes the place of

inhalation of compressed air, and is to be resorted to in cases of atelectasis, defective development of the lungs after pleuritic exudations of either serous or purulent nature, and after severe acute pneumonia; further, in cases of adhesions of the pleura and pneumothorax. The weakness of the respiratory muscles, on the diseased side is remedied by the compression of the healthy side, combined eventually with inhalation of compressed air. In this way a normal condition of the thorax and lung is more or less restored. In mild cases simple compression suffices, which in more severe cases it will be necessary to treat with compression of the healthy side and inhalation of compressed air once or twice a day, and twice, thrice, or four times a day with compression alone for 15, 30 or 45 minutes. It is advantageous if walking exercise in the open air can be taken during this treatment. S. suggests that the patient should wear, night and day, over the shoulder of the healthy side, a padded cap of leather fastened across the back and chest by a strap.

3. Bilateral or circular compression of the thorax.—This takes the place of expiration into rarefied air, and is a suitable treatment of pulmonic emphysema without complications. This disease demands frequent ventilation of the lungs, and this is most effectively provided by the bilateral compression of the thorax, which in some cases may be done 2 or 3 times a day for 10 or 15 minutes, combined ultimately with simultaneous expiration into rarefied air as a subsidiary means. To continue the after effect bilateral compression must be done 2 or 3 times a day for 15 or 30 minutes, but at a lower degree of compression, or, what answers the same purpose in a more convenient way, an elastic corset may be worn several hours a day. By these methods expiratory insufficiency may be remedied, but it remains an open question whether the anatomical basis of the emphysema can thus be affected. In all cases the temporary correction in this way of the expiratory insufficiency at the same time checks most effectually the progress of the disease, and coincides with the strengthening of the power of expiration produced by the elastic corset.

Great care is necessary in determining the indications for the adaptation of this method, and particular attention must be given to the normal course of the individual phases of respiration, and further, to their disturbances, and the insufficiency of inspiration and expiration. For the elastic corset must not be applied in every

form of dyspnea, nor even in all affections of the respiratory apparatus accompanied by insufficiency of expiration (purely nervous bronchial asthma, indistinct bronchial asthmatic conditions of aged emphysematous patients). Nor is it applicable even in all cases of emphysema, especially in such as are ultimately complicated with insufficiency of the inspirations as well, or with interstitial chronic pneumonia. A little practice will soon enable one to determine the necessary degree of pressure both for unilateral and bilateral compression. It is best to begin with the lowest degree of pressure. The great merit of this combined treatment lies in the fact that it admits a direct local influence on the diseased lung.—*London Med. Rec.*, May, 1888.

THE DOSHISHA HOSPITAL.—The second annual report of this hospital situated at Kyoto, Japan, contains an interesting account of the opening of a Nurses' Training School in connection with the hospital. The official address and letters show that the Japanese themselves are taking a deep interest in this new work. The buildings occupied by the hospital and training school have been erected with funds contributed in this country and Europe, while the Japanese gave the land. Good work is being done by these institutions, and their influence will be invaluable in that country.

THE ST. LOUIS MEDICAL COLLEGE has increased the length of its annual session to eight months, and has extended the course of study to correspond to this longer session, and has rearranged the entire three years' curriculum with a view to more perfect grading of the work of the several classes. The aggregate time of study required by this college is now more than twice that required by any other school in this state.

THE COLLEGE OF PHYSICIANS AND SURGEONS OF THE CITY OF NEW YORK has increased the length of its course of study. The lecture term will commence about Oct. 1, and continue till commencement day about June 15. Three full years of study will be required of all students, matriculating since July 1, 1883.

SOCIETY PROCEEDINGS.

ST. LOUIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

Stated Meeting, June 21, 1888, the President, Dr. WALTER COLES, in the Chair.

Dr. Hulbert read a paper (vide p. 193) on
ELECTRICITY VS. TAIT, OR THE USE OF ELECTRICITY IN INFLAMMA-
TION AS FOUND IN GYNECOLOGY.

Dr. Hulbert.—In the methods adopted in the treatment of the diseases mentioned in the paper, I have not been governed simply by a desire to meet the local indications or the local expressions of the disease, but more especially by general considerations. My desire has been to affect the patient generally as well as to remove those particular elements that seem to be perpetuating the local difficulty. In the treatment of cases that might be classed as simple ovaritis—and these are not common—and peri-ovaritis—and in this connection I do not refer to cystic degeneration of the ovary—the method that I have adopted is what might be termed sympathetic galvanization, or galvanization more especially of the sympathetics. In making the application one electrode has been applied upon the spinal column, lumbar or cervical, and the other, the active one, through the vagina to the diseased ovary. The method of applying the electricity may also explain why I have not been called upon to use a stronger current. Currents ranging from three to fifteen milliampères were about all that the patients could stand with this method. I also resort to what might be called direct galvanization of the ovary, that being accomplished by an electrode in the vagina and the other over the abdomen, bringing the surfaces as nearly together as possible. In some patients it is impossible to use this method. They are unable to stand it. In

that class of cases especially the sympathetic galvanization is the best means of treatment.

Dr. Frank Glasgow.—What kind of electrodes do you use?

Dr. Hulbert.—I use the ball electrode in the vagina and the small sponge or carbon on the abdomen for direct; a larger punk covered plate for indirect or sympathetic galvanization. The ball electrode is one-half inch in diameter. The carbon abdominal one is one and one-half inches in diameter: on the spine I generally use an electrode about five by eight inches. We must bear in mind that the application is to be made so that it will be effective—affecting those tissues that we desire to influence and not diffused over the entire pelvis. If the electricity is applied in the region of the lumbar spine, it cannot but influence the sympathetic ganglia in its passage through the body. There is no doubt about its going through the body and through the tissues: one electrode being on the inside the current can not go through in any other way; it must go through the patient, and it must influence the tissues through which it passes. I will mention a case of simple ovaritis apparently in a patient who was first admitted to the hospital with a laceration of the cervix, and suffering with a complication of troubles consequent upon that. She was relieved to some extent and left the hospital. After having been out of the hospital some time she came back for treatment, and at that time I discovered that the ovary itself was involved. It was enlarged to three times its usual size, tender, highly sensitive. I could get at the ovary very readily on account of the lax condition of the abdominal muscles, and a roomy pelvis, being somewhat prolapsed on account of its size. The treatment applied in this case caused a decided aggravation of the trouble; I used galvanism three times with weak currents three to five milliampères, and the reaction was decided, even aggravating the trouble. I then resorted to this other method of galvanization through the sympathetic system with the result that the patient recovered. The treatment extended over probably six weeks or two months. Unfortunately I have not been able to follow the case, and do not know whether the result has been permanent or not.

Dr. T. F. Prewitt.—Was this method one in which you used one electrode in the vagina and the other over the abdomen?

Dr. Hulbert.—No, sir; I placed the large electrode over the lumbar spine, then the other electrode in the vagina; later one over the abdomen, the other in the vagina against the ovary.

Dr. Coles.—Have you adopted any rule in regard to which electrode you place in the vagina and which on the outside?

Dr. Hulbert.—Yes, but I will consider that later. The conditions of salpingitis, hydrosalpinx and pyo-salpinx can all be treated as one class of cases, as only too frequently we find the entire series combined. If there is an enlargement of the tube, with adhesions and distortions and displacement of the uterus, and an involvement of the endometrium as well as the uterine body, which is indeed a clinical picture of a class of cases, my first endeavor is directed to the general health of the patient; and to accomplish that, I use sympathetic galvanization. I make no attempt to relieve the contents of the Fallopian tube, believing that it is far better to get my patient into as good condition as possible before directing my treatment to the tube itself. I apply the current the same as in ovaritis in some cases; in other cases I have resorted to what is termed the mixed current, which partakes of the nature of the Faradic as well as the galvanic, and is generated by the McIntosh or other Faradic machine. I was a long while in doubt as to the explanation to be offered from the results I got from that. Now in considering what is to be understood by the primary Faradic or primary induced current, we must bear in mind that it is purely an induced current; and the effects are mechanical; that the application of the current is for the purpose of producing muscular contraction, and thereby relieving any congestion that may exist in the uterus itself or in the pelvic tissue, due to relaxation of the muscular tissues, without the presence of inflammation. If this character of current is used when there is inflammation present, you are sure to aggravate the inflammation, whereas with the secondary induced current or current of high tension, the sedative current or current which produces sedation, relieves the suffering in acute and chronic inflammations. Now I have found that in the McIntosh machine I have the construction of what is considered the primary coil consists of nothing in the world but large wires coiled, through which the current passes directly. It is not an induced current. It is simply a rapidly interrupted galvanic current.

Dr. Frank Glasgow.—Are you referring to what we call a primary current?

Dr. Hulbert.—Yes! You can cauterize with this primary current if you have enough cells. I was very much non-plussed the first time I had that experience. I was using a metal electrode with

about ten or fifteen cells in the battery, and when I took out the electrode and introduced the speculum I found I had an eschar. This was with the primary current with McIntosh's battery. After investigating the manner in which the coil was made it was very plain why the thing had happened. I had been using an interrupted galvanic current. Now in treating pyo-salpinx the method which I pursue has been the following. After preparing my patient by getting rid of the surrounding inflammation, and getting her general health in as good a condition as possible, I have resorted to the aspirator to empty the tube, and washing out the tube with antiseptics, and I have had no trouble follow the operation. I believe the reason is simply this, that my aspirating trocar and needle is so constructed that I can make it an electrode, if I desire, and after introducing it into the tube, aspirating the contents and washing out the tube by passing through it a saturated solution of boracic acid, and continuing the washing out until the fluid comes back perfectly clear, I then proceed to supply the connection between the aspirator trocar and the battery and pass the galvanic current directly through the aspirating trocar and to an electrode placed upon the abdomen; in other words making a galvano-caustic application to the tissue leading from the tube to the vagina and in that way throw up there a walled sinus that will protect the surrounding connective tissue from any leakage of pus or septic material that might be generated in the tube after the operation had been performed. In the first patient on whom I made this operation, the result was that after that application and making a perfect drainage, which did occur from the separation of the tissue that was destroyed by the caustic application of the electricity, a drain was formed and the tube at no time showed any tendency to refill. I at no time discovered any particular quantity of pus. There was leucorrhea in my patient coming from the endometrium. My next idea was to influence the nutrition of the parts concerned so that all inflammation and neoplasm would be obliterated. This was accomplished by galvano-caustic applications for a time followed by galvanism. I do not know whether the cavity of the tube was obliterated or not, but certain it is, the parts were in an apparently normal condition. Certain it is the woman recovered and is able to earn her living; and she is now employed in a hotel in a position that requires a great deal of exercise. In the treatment of the case after the aspiration this thought occurred to

me in regard to the effect that I wanted to accomplish upon the lining membrane of the tube. We all know that there seems to be an intimate sympathy between the different parts, as for instance the endometrium, the ovaries, the lining membrane of the tube; there is a very intimate connection. We see this manifested in the process called menstruation; we see it all manifested in the process in which there is a development of fibroids in the uterine tissue, with hypertrophy of the mucous membrane. I have seen it half an inch thick, with follicles so large that we could stick lead pencils in them. This sympathetic influence, which excites these different parts of the genitalia in women, it has occurred to me, might be utilized in the treatment of these cases. After emptying the tube and draining it I have resorted to galvanic cauterization of the endometrium to correct the vicious process that was going on there in the production of this leucorrhea, and the result seemed to be a very happy one. I explain the effect simply through the influence of the sympathetic nervous system. The connection is a very close one, and the application made through the endometrium must affect the nutrition of the lining membrane of the Fallopian tube of the diseased ovary, and for that reason I frequently resort to this galvano-caustic application of the endometrium whether the endometrium is diseased or not. Of course where the electrode is applied over the spine, there can be very little direct effect of the galvanism upon the ovary, because the current would perhaps not have a tendency to pass in that direction. Where the electrode is applied upon the abdomen, there must be some direct galvanism passing to the ovary as well as to the tubes. In the case of pyosalpinx I could discover nothing but this enlarged tube. She had been sick since August of the preceding year, and although she denied it, I felt satisfied from her history that she had had a gonorrhea. That was the cause of her difficulty. Since that time she had been troubled with a decided leucorrhea, more or less irritation of the vagina and a sickening, throbbing pain located in the inguinal region and also an aching pain located in the hip joint and extending down the thigh, three symptoms which are very typical of tubular disease. The result of the method of treatment applied in that case, so far as I am able to determine, was a complete recovery. The tube never showed any tendency to fill after its drainage, and when the patient passed from under my care she was, so far as I could determine, in perfect condition.

Dr. McPheeters.—Have you ever used electricity in that form of endocervicitis mentioned by Sims, characterized by an exceedingly nasty discharge, something like a cervical leucorrhea and which produces sterility by the secretion causing death of the spermatozoa. The discharge is very difficult to wipe away.

Dr. Hulbert.—Yes, sir. I have used electricity in that class of case with satisfactory results. There is no disease of women that is more persistent and stubborn than that one thing, endocervicitis, for the simple reason that we do not get at the seat of the trouble. It is in the follicles and not on the surface of the mucous membrane of the cervix. I wish to speak more particularly of a case of peri-ovariitis, in which an accumulation of pus occurred between the ovary and the end of the Fallopian tube. An abscess formed at that site. The reason I made that diagnosis is simply because I was permitted to make a post mortem on her afterwards. That was a case that I conceived at first was simply a case of pyo-salpinx. I think Dr. Barret saw the case with me at one time, and he was rather inclined to the same opinion, although he was not positive about it. The same treatment was attempted as in this other with this difference that in the other case we got out of the Fallopian tube about an ounce and a half of pus, and in this case we only got out about half an ounce. We resorted to the same method of treatment. The result, as afterwards determined by the post mortem, was that the cavity of the abscess was obliterated, and that the suppuration was stopped, and the ovary, which at the time of the operation was certainly twice as large as normal, was reduced to a size which showed that it was in a state of atrophy. Unfortunately there was a complication in this case. This was not a simple case of pyo salpinx. There had been excessive peritonitis, with excessive adhesions, and the result was that the patient did not make a recovery. In spite of the fact that the ovary atrophied and the accumulation of pus disappeared, she still suffered from intense ovarian pain that was characteristic of ovarian irritation, and we concluded that the condition there was simply due to the great amount of adhesions that had occurred, and the ovary had really become buried beneath these adhesions; that it was not free and the traction and pressure of the adhesions caused the pain. Tait's operation was finally decided upon, and it was performed with the result of finding the condition diagnosed before the operation, with this exception, that upon the opposite side we found a small hydro-

salpinx, the tube containing possibly half an ounce of serum. An examination of the ovary after its removal demonstrated beyond all possibility of doubt that relief from the abscess and ovaritis had been perfect; that there was a great deal of good done at that site by the treatment that she had received, but it was one of those cases which electricity nor anything else would relieve on account of the unfortunate position in which the ovary had got; and there was probably no other way for her to recover except through the removal of the ovary, but unfortunately the patient died from septicemia. The operation was done at a hospital where nearly every abdominal operation that was done had more or less septicemia.

In answer to Dr. Coles' question in regard to the pole to be used at the seat of the trouble, I will say, that it seems to me that the idea of electrolysis has so thoroughly pervaded the minds of gentlemen who have resorted to the use of electricity, that there is nothing else to be hoped from it. Now in my conception of the treatment of this class of cases, electrolysis can have very little place. It is not the thing to resort to, because there is very little to electrolyze, so to speak. There is hypertrophy here, possibly a stricture of the Fallopian tube; there is hypertrophy of the ovary; there are adhesions, and they extend in all directions upon the pelvic peritoneum. They also involve the different organs, in different positions, but if we simply work with the idea of electrolysis to accomplish the result in this class of cases, I do not think our results would be as expeditious. If we are working with the idea of electrolysis, we must use the negative pole at the site of inflammation to get the best results. The feature in the determination of the pole that should be applied to the special part, is the fact of electrotonus, so-called, or the electrical condition obtained through the nerves. The negative pole placed at the seat of disease produces an irritation and exaltation of nervous influence, irritability; arterial congestion is produced by the negative pole, whereas the presence of the positive pole produces an anesthesia, the result being a passive congestion. So that the pole in this method of treatment to my mind does not have the importance that the enervation of the part has. We must be guided more especially by the existing irritability. In the process of repair it seems to me a proper enervation is best sustained and best secured by having the influence sent from the part as mild as possible, ap-

proaching as nearly as possible the condition we might expect in the natural state of things. If there is a high irritability existing in the part, it is our duty to use the pole that will reduce the irritability. If the condition seems to be more of a sub-acute or chronic character, I should place the negative pole at the diseased part; but, as I say, the influence in my opinion to be brought to bear in these cases is more through the nervous system or through the process of nutrition than through electrolysis.

Dr. G. A. Moses.—Do you use any other treatment in connection with galvanism in these cases of inflammation?

Dr. Hulbert.—Yes. I am glad Dr. Moses asked that question. I use the cotton tampon simply as a support to the part. I use nothing in the way of local medication. I simply use antiseptic powder to prevent septic infection. I use boracic acid more than any thing else for this purpose.

Dr. Gregory.—Do you use tonics?

Dr. Hulbert.—No, sir. I resort simply to good food, and keep my patient's bowels open. That is all the medication that I generally resort to.

Dr. Gregory.—Do you use the cotton dry?

Dr. Hulbert.—Yes, I use ordinary cotton.

Dr. E. C. Gehrung.—I am glad to hear this paper of Dr. Hulbert, as I think it corroborates pretty much everything that I said in the paper I read last month. My success in the treatment has been pretty much the same, though I have not used electricity as much in the inflammatory troubles as Dr. Hulbert. I am pleased that the doctor's experience shows also, as I stated in my paper, that almost any abdominal tumor of non-malignant character may be reached, treated, and probably cured by means of electrolysis or electricity in the place of laparotomy. The doctor has not laid stress on a certain point which I have brought forward in the use of electricity, and that is the hollow electrode. Doctor Hulbert states that he has used a needle electrode—a hollow needle through which the contents of the cyst could flow away, and that thereby the cyst may be drained and cured. Doctor Hulbert mentions another subject which I have advocated, that is, that where the needle passes and electrolysis is used it binds together the different layers of tissues that have been perforated, which prevents the fluid contents being extravasated into the intermediate space, so that a complete fistulous tract is formed through which the fluids

may pass away. In the case mentioned in Dr. Hulbert's paper there is no stress laid on, and probably there was no necessity for future drainage, as in the cases mentioned in my paper in which there existed such a necessity, and so I left the drainage tube in the abscess of the cyst, so that the fluid that formed afterwards could flow away, and at the same time the cyst could be washed out at any time. That this precaution was necessary in my cases was proven because in my last case for twenty days an ounce or two of pus and serum was collected for inspection by means of a little rubber bag attached to the instrument. I am fully convinced that if electricity is used on that principle, laparotomies will be reduced somewhat in number. I am also pleased to hear that Doctor Hulbert had the same idea as myself for making either the needle or the trocar the carrier of electricity. If I had known in time that I could attend this meeting, I should have brought one of my instruments with me. It is a modification of the double cannula which I described for washing out the uterus. I have a cut of it here which will give a fair idea of the instrument. As I stated the other night, it is possible that in puncturing the abscess through the tumor the instrument may perforate a coil of intestine that may be entangled in the mass of exudation. I feel that I am authorized to hope at least, that even should the intestine be perforated, the abscess can be drained and cured, and after the tube is removed I believe the punctures in the intestine will heal just as well as those in other tissues. I think the exudation tumor will close up those perforation points as well as if it was sewed up, and that, in fact, no damage will ensue.

Dr. Glasgow.—I have been very much interested in just such cases as Dr. Hulbert has mentioned. I must say that I have always been sceptical in regard to the utility of electricity in such cases where pus is present. It seems to me that the rational treatment in all such cases is to remove this foreign material, and Dr. Hulbert seems to agree with me, for he did remove the material and wash out the cavity. We know that pelvic abscesses have been cured by this means; they have been aspirated, and then shrank and disappeared without the use of electricity. So I think Dr. Hulbert is claiming too much for the use of electricity in his cases. The cases would probably have followed the same course without electricity. I do not say this to decry the use of electricity. In certain cases I believe it is a very valuable agency and especially

in those cases of ovaritis where we can do almost nothing in any other way. I am not satisfied with the old method of local treatment, viz., counter-irritation, iodine and glycerine, etc. I believe that in many cases it is worthless. I have been seeking for some other treatment, but electricity gives quicker and more lasting results than anything else I know of, when applied through the vagina, to the spinal column or to the abdomen. The effect when the extra-vaginal pole is applied to the abdomen or to the spine seems to be the same. I always use the positive pole in the vagina and the negative over the abdomen or lumbar region of the spine. I can not see that there is much difference in the use of it. Dr. Hulbert sometimes uses two electrodes to one part, that is, one to the vagina one to the abdomen and the other pole to the spine. I do not think this is very rational, because the resistance between those two electrodes will certainly be different, and the electrode which has the least resistance will certainly absorb nearly the whole of the current, if not all of it. I think it is of no great utility. In regard to the action of this current, I think we get from electricity very often the same action that we get by other means. Some of the French surgeons puncture the cervix when it is very large, hard and hypertrophied—puncture it with the actual cautery, and by this means bring about a resolution of the infiltrated products. Hence the cervix becomes soft. We notice that if we have a cervix which is as hard as cartilage at the time of operation, a few days after it is soft. I think we accomplish the same thing by our present treatment. That is exactly what we do accomplish, I believe, with electricity in many cases; we stir up the vitality of the part; we stimulate it, and cause the absorptive powers to increase, and in this way cause the noxious material to be carried away. That is the same action which we get by other means. There is no mysterious action about it. Last winter I performed the operation which Dr. Hulbert has designated as Tait's operation removing the ovaries and tubes, in a case which I had had under observation for three years previous. It was at first a case of congestion and enlargement of prolapsed ovaries. There had been for years before puberty severe pain over the ovaries, occurring on any extra exertion and never completely disappearing. Since the appearance of the menses, there had been intense hysmenorrhœa, and much pain between periods. I used the galvanic current in this case, 10 ma.+V.—L. spine or abdomen for 20

minutes at varying intervals, sometimes several weeks. This gave her greater relief than any other treatment, but it did not cure. For three years I had used counter-irritation, scarification, packing the vagina, etc., and had accomplished nothing, except that the ovaries were higher and smaller: so I removed both ovaries and tubes last November. The pain disappeared from the time of the operation, and for a month and a half she had no pain. She got well without a bad symptom. Then she began to have some pain over the right kidney. The urine was intensely acid. This pain remained very persistently in the right kidney for two months, may be more, and then it disappeared, the patient having been continually under alkaline treatment. I heard from her several weeks ago, and she said she had no pain nor ache, and had never been so comfortable since early childhood. This patient has never menstruated since the operation, but sometime after the operation the abdomen became very painful, she had headache, congestion of the head and so on. For several days I treated the symptoms by purging, but it did no good. I bled her the next day and she got well. I have bled that girl every month since these symptoms began, regularly. There is not a sign of menstruation, but the bleeding relieves her within twenty-four hours. She feels better within fifteen or twenty minutes after the bleeding.

Dr. McPheeters.—You should try a brisk cathartic?

Dr. Glasgow.—I tried that but it had no effect.

Dr. Gregory.—You should try antipyrin?

Dr. Glasgow.—She has taken antipyrin. That is the only thing that gave her relief, and that lost its effect and made her feel bad. I used electricity on this patient, applying it to the vagina and over the spine and abdomen, and it sometimes gave her relief. Sometimes the relief did not come on for a couple of days. I will say that the ovaries in this case were simply shrunk very small and bound down; there was also a hydro-salpinx in the case and the electricity did not cure it, but the packing of the vagina did. The hydro-salpinx recurred for three months and discharged immediately after menstruation very fetid clear water. She came into the hospital to be operated on for this hydro-salpinx. That was what I thought was causing the trouble. So I packed the vagina for a month and it did not refill. In fact the empty tube contracted and became normal to all appearances. It was not electricity that

did it but the cotton in the vagina. Then I kept her a long time hoping the pain would disappear, but it got worse instead of disappearing. Then I operated, having exhausted every other measure.

Dr. Hulbert.—Have you used electricity since the operation?

Dr. Glasgow.—No.

Dr. Scott.—Why do you bleed this patient?

Dr. Glasgow.—To relieve the general plethora. I consider it to be due to habit. Whether or not there is a fragment of ovary left I do not know. There is certainly no menstruation.

Dr. McPheeters.—Can't you relieve that by a copious flow of serum such as follows the application of glycerine?

Dr. Glasgow.—I do not know. It is not only the pelvic organs but the head as well; it is the whole, general vascular system. Then there is another case that I operated on two years or more ago, and in which we did not remove the second ovary, and that woman told me the other day that she wished she had not been operated on. When she told me that, I felt somewhat chagrined, and I asked her why. She said: If you had not operated on me I would have died long ago, and she said she had never forgiven me for not taking out the other ovary. She still suffers, though not as she previously did. Electricity is the only thing which relieves this patient. We operated on a case on last Friday and removed both tubes and ovaries, one of which was cystic and as large as a large walnut; she suffered pain continually. She has been greatly benefited by the operation, being now very comfortable.

Dr. Boisligniere.—Did you try electricity in that case.

Dr. Glasgow.—No. She came to the hospital to be operated on; she had been a sufferer for years; every method of treatment had been used. I felt satisfied that if I used electricity I would relieve her pain temporarily but would not cure her, and would simply put off the operation, and I did not use it.

Dr. G. A. Moses.—I think we are indebted to Dr. Hulbert for presenting before us for discussion and calling our attention to the value of electricity in the treatment of very many of the affections to which he refers; and I think that one of the strongest reasons why we should use it is the fact that we all admit that no case of supposed pyo-salpinx or hydro-salpinx or inflammation of the tubes, whether chronic or acute, should be dealt with operatively before all the milder and less formidable forms of treatment have been

attempted. I think that is one of the strongest arguments in favor of the use of electricity in this class of cases. So far as the special cases to which the doctor refers are concerned, I do not think he has proven the value of electricity in this class of cases. As Dr. Glasgow says, he treated them surgically, emptying them, washing them out antiseptically, and treating them as he would inflammations elsewhere. So far as regards the application of electricity subsequently, although I have no doubt it has some effect in removing the remnants of inflammation, I do not think that pus will be removed by the application of electricity. The use of electricity even in those cases in which Dr. Hulbert seems to have been very successful, was very largely tentative, I think; and it is very questionable to my mind whether in the majority of these cases the good effect is not largely due to the adjuncts or other forms of treatment which are more or less connected with the electrical treatment. That is the reason why I asked Dr. Hulbert whether he confined himself entirely to the use of electricity, or whether he used other treatment in connection with it. It is a fact that simple firmly placed, carefully adapted tampons in chronic inflammation in the pelvis will result in a cure with or without electricity. I think the doctor should experiment without the use of medication at all, unless some medication in relation to the general health of the patient, and see if the case would recover without anything but the electricity. When he uses these antiseptic powders he is using a valuable remedial agent. He says he has used boracic acid principally. I have seen pelvic pain very much mitigated by the use of this remedy, followed by the use of tampons. So that unless we should experimentally use electricity and confine ourselves to it in a certain class of cases, it will be very difficult for us to determine how much good this method of treatment results in. I am treating several cases of infiltration from chronic inflammation now precisely in that way, using no other means than the electricity; also two cases in which there are cysts, which I would have been tempted to operate upon only I was impressed with the effect of the galvanic current. I have no doubt that in the course of time electricity will be of great value in the treatment of these cases.

Dr. E. H. Gregory.—I feel very much like Dr. Moses. The doctor has read a good paper. I am always glad to hear suggestions of how we may treat our patients without these fearful muti-

lations. I think the society is indebted to Dr. Gehrung and Dr. Moses and Dr. Glasgow for agreeing that it is possible to relieve these cases without a resort to this too common, too ready method, and I am glad that I was the means of saving one ovary in the case which Dr. Glasgow mentioned. Dr. Glasgow says I have been the means of saving one ovary and I am glad of it. I am sorry that the poor woman knows that there was one left. I think that was the unfortunate part in the history of her case; otherwise she might be entirely well, what remains being a mental trouble, a disease which is too common, and but for which this mutilation never could have maintained the place in surgery which it has. I believe if it were not for this mental trouble the operation would have been as far from being established as the operation for the removal of the testes in the male. I am satisfied that there is a spirit running in favor of the operation, and I hope that these papers may have an effect in turning the course of the current.

Dr. Hulbert.—I simply desire to correct Drs. Glasgow and Moses in regard to the statements which they have made and the positions they have taken in regard to the use of electricity under these conditions. I do not think they understood me. I have not said anything about pelvic abscess or its treatment by electricity. If a pyo-salpinx is a pelvic abscess, why certainly I have said something about the use of electricity in pelvic abscesses, but it seems to me there is a vast difference between what we have been in the habit of calling pelvic abscess and pyo-salpinx. The cases that I reported here this evening, I claim, from my examination of them and the experience that I have had with them, are not cases of pelvic abscess; they are certainly cases which come under the designation pyo-salpinx. Now if anybody by simple aspiration of the Fallopian tube which contains pus has cured the trouble, if that is the uniform result of aspiration, that they get well, certainly it is news to me; I have never heard of it. I do not think it is a fact. I think that the testimony of Tait on that subject and the testimony of others who have resorted to the treatment has been anything but favorable; the result has been to increase the inflammation, to aggravate the symptoms, and the patients have been made worse instead of better. I do not wish to be understood as speaking of pelvic abscess. Another point: I do not wish to be understood as antagonizing Tait's operation where it is ultimately demanded.

I do not deny that there are cases in which Tait's operation must be resorted to. Electricity will not reach them; will not accomplish a recovery. My object in reading this paper was simply to present a method or means for a particular class of cases so that we may avoid Tait's operation, by the use of electricity. In criticizing the use of the electricity in these cases, I do not think it is fair to assume because some cases may be benefited or cured by tamponing, that therefore the electricity has no effect. Of course there are cases in which tamponing has a beneficial effect, but we have not been able to get such good results in such desperate cases as has been achieved by electricity. I am not so fanatical in the use of electricity that I do not recognize the advantage derived from the use of the various adjuncts.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, May 29, 1888, DR. SHAW in the Chair.

Dr. Herman showed a case of injury to the brachial plexus producing a very peculiar combination of paralyses. The injury was produced at about the point where the branches from the fifth and sixth nerves combine, the point to which attention has been drawn by Prof. Erb. Some seven weeks ago this man fell down a flight of stairs and severely injured his neck. He also split his ear, but the main injury was on the side of the neck. There was also a contusion of the shoulder. The injury was probably at that point where the cervical plexus comes out between the scalenus anticus and scalenus medius. The paralysis occurred as shown after this injury, and he also felt a numbness corresponding to the distribution of the nerves. He has improved a little under treatment but not very much. There is a paralysis of the deltoid muscle. He does not succeed in lifting his arm to a horizontal position. The muscle on the other side is well developed. The biceps is paralyzed, and he does not succeed in drawing up the arm, especially when he has the hand supinated. He does draw it up by means of the supinator longus when he has the hand pronated. There is paralysis of the internal brachial muscle which, however, is not very apparent in this action. Also of the infraspinatus and rhomboid partially; he is not able to rotate his arm outwards by the action of the infra-

spinatus. He can rotate his arm a little, but not very well. Then too, when he draws his shoulder blades back, there is a noticeable difference in the action of the rhomboid muscles on the two sides, paralysis of that muscle on the affected side. The next muscle which is paralyzed is the supinator longus. Then there is anesthesia in the region of the axillary and of the musculo-cutaneous nerves, down the radial side of the arm as far as the wrist. Then there is some numbness of the thumb; the paralysis is confined to the muscles named, the muscles of the fore-arm are good; the action of the pectoral muscle is good, and the serratus magnus, and he can hold out his arm but not very well, on account of the paralysis of the deltoid. The paralysis, then, is confined to the suprascapular nerve, which enervates the supra- and infra-spinatus muscles, the little nerve which supplies the rhomboid muscle also coming from the fifth space to the axial nerve innervating the deltoid, and the teres minor, then the musculo-cutaneous nerve innervating the biceps, the internal brachial supplying sensibility for the region of the musculo-cutaneous nerve, that is the radial surface of the fore-arm. The doctor then demonstrated the different effects of the faradic current and the interrupted galvanic current, showing the different effects when applied to the affected side and to the muscles which were not affected.

Most of these cases are due to injury at the point which he had indicated. The muscles implicated are always the deltoid, biceps, supinator longus and internal brachialis, sometimes the infraspinatus and rarely the rhomboid. Cases due to tumors are often observed and some due to rheumatic affections. Duchenne described a case of paralysis similar to those affecting this same group of muscles in children that have been born by breech presentation, in which the head gave a good deal of difficulty, and in which the method of extracting the head by putting two fingers into the child's mouth and two fingers under the shoulder has been used, and in which the pressure upon the brachial plexus has been very severe, and in these cases one arm or the other hangs down helpless. In all the cases observed the prognosis has been good except those in children in whom there was reaction of degeneration; and I believe they all made a good recovery ultimately. In this case the prognosis is not so good. It has lasted six weeks now with only slight improvement. He has been under my treatment two weeks, and is only a little better; he can now put his hand

nearly up to his mouth; he can get it to his shoulder showing that the biceps and supinator longus have improved a little. He does not complain quite so much of the tingling in the region of the musculo-cutaneous nerve, nor of so much numbness of the thumb. The region of the neck was very much contused and swollen and tender and is still somewhat so but not very much.

In answer to a question by Dr. Shaw, Dr. Herman said that he thought the nerve was crushed.

Dr. Fry remarked that this was a very instructive case; and the demonstration of Dr. Herman had given as thorough an idea of the condition of the parts as we could possibly have unless the man was so unfortunate as to die and give a chance to see the pathological condition. However, we can theorize in this case with considerable accuracy without an opportunity of examining the nerve itself. We know that there is a very considerable amount of degeneration of that nerve. With the hands on opposite sides of the neck it is very easy to detect the fact that there is still a great deal of swelling. He would take a more hopeful view of the case, as there is probably room for a great deal of improvement there yet.

Dr. Shaw thought the case one of extreme interest. He agreed with Dr. Fry in a more favorable prognosis. Only fifty days have elapsed since the injury, and we have not yet anything like a tetanic contraction of the muscles, which is very apt to be presented after a lapse of fifty days if the prognosis is very unfavorable. There is a well marked contraction, it rapidly develops and it rapidly ceases, just as does the normal muscle upon being stimulated by the galvanic current. If there was not good reason for believing that this man would recover in great part at least the use of those muscles under continuous treatment, in his opinion we would have by this time a somewhat tetanic contraction of the muscles.

Dr. Herman said this man for about ten days now, has been under electrical treatment, and they had used some massage but had particularly employed the electrical treatment at the point of injury and to the affected muscles. He has as yet received no internal treatment, but the doctor proposed to give him perhaps small doses of iodide of potash and then a tonic prescription containing some strychnia. In regard to the contractions in the degenerate muscles, it seemed to him that they are slower than contractions of the healthy muscle. There seemed to him to be a

slight rise, and a slight tetanic contraction, or rather a prolonged contraction of the muscle, appreciably longer than that of the healthy muscle, always typical of atrophic degeneration of the muscles. As to the prognosis he did not take an absolutely gloomy view. He was not certain that he would recover the same strength that he had before, though he might in time, but, if so, it would take several months; still he would certainly improve decidedly.

Dr. Steele asked why iodide of potassium was given. Iodide of potassium in small doses running up to say sixty grains three times a day causes improvement; but he did not understand the *modus operandi* of the drug. Why should we expect any benefit from iodide of potassium? *Dr. Gibney*, of New York, reports some remarkable cures from the iodide of potassium.

Dr. Homan asked if possibly the nerve may have been lacerated by some bony structure.

Dr. Herman said that there does not appear to have been any fracture of bones there. The transverse processes are all there and not fractured. His impression was that the nerve had been crushed to some extent and is probably still pressed upon by the exudation about it.

Dr. Fry related a case showing that there may be effusion when there is not much apparent evidence of injury at the site where the injury is known to be inflicted, even where there is a great deal of paralysis. A fireman was caught by a falling wall; and a piece of timber struck him over the region of the brachial plexus, resulting in complete paralysis of this portion of the arm. There was no complete anesthesia of the arm and he suffered severe pain which was referred to the various distribution of the nerve. The arm was amputated at the shoulder on account of this extreme suffering and there was an opportunity of examining the brachial plexus. It was found that the continuity of the cord of the brachial plexus was perfect. The nerves were not involved in an inflammatory exudate; there was no evidence of inflammatory processes about any of the cords of the brachial plexus, yet there was considerable degeneration, and specimens of several of the cords showed complete degeneration of the nerve. What the initiative process was that resulted in this complete destruction of the cords of the brachial plexus, it would perhaps be difficult to determine. There was no evidence of laceration of the sheaths anywhere. In all probability there was a condition which resulted in inflammatory changes of

the nerve fibres and their destruction. It was over eighteen months after the injury before the amputation was made, and there was absolutely no reaction.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.—This organization, which holds its first triennial meeting in Washington this month (Sept. 18, 19, 20,) differs from all other associations of physicians in this country in that it is composed of several distinct associations of specialists, each retaining its autonomy and holding its own annual meeting as heretofore.

Arrangements have been made for the meeting of the several societies in the daytime in different halls, while the sessions of the Congress will be held in the evenings commencing at eight o'clock. The sessions of Tuesday and Wednesday evenings will be held in the main hall of the Grand Army Building 1412 and 1414 Pennsylvania Avenue, and that of Thursday evening in the hall of the National Museum. During Thursday evening the Army Medical Museum Library building which stands next to the National Museum building will be lighted and open to members and invited guests.

On the evening of Monday a dinner will be given by members of the Congress to invited guests of the several participating societies: Tuesday evening an informal collation will be given at Willard's Hotel to guests and members who may choose to attend. A similar entertainment will be given at the National Museum building Thursday evening after the final adjournment.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS will hold its first annual meeting in Washington, D. C. Sept. 18, 19 and 20, 1888. From the preliminary announcement which we have received there is promise of a very interesting and profitable meeting with able papers and thorough discussions.

THE AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS holds its meeting in Washington, D. C., Sept. 18, 19 and 20, 1888. The programme which has been issued gives promise of a variety of interesting papers which will doubtless call forth valuable discussions.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION meeting postponed one week, September 25, 26 and 27.

ST. LOUIS COURIER OF MEDICINE.

VOL. XX.

OCTOBER, 1888.

No. 4.

ORIGINAL ARTICLES.

THE WATER WE DRINK.

BY E. M. NELSON, M. D., ST. LOUIS, MO.

I INTEND in this paper to consider not the whole subject of potable water, but the more limited one of the water which we citizens of St. Louis drink.

There are three sources of water supply available to the citizens of St. Louis, viz., cisterns, wells, and the water of the Missouri River¹ as furnished by the city water works.

I learn from Water Commissioner Holman that it is estimated that about five-eighths of the population of our city use water from the waterworks.

I have no information as to the other three-eighths—what proportion of them are so situated that they could have access to the waterworks, if so disposed.

In 1885 it was ascertained in the course of a sanitary inspection—

1. Though the Missouri river flows into the Mississippi river some twenty miles above the point at which our waterworks are situated, the volume of water in each of the rivers is so great that they are not mingled for many miles farther down. The difference in appearance of water from the east and west banks of the river at St. Louis shows plainly that that from the east bank is Mississippi River water, while that from the west bank is Missouri River water.

tion of the city that there were in the part of the city already provided with water pipes about 4,000 wells, the water of which was used for drinking purposes by one or more families. The character of the water from these wells in the thickly settled parts of the city is shown by the result of examinations made at the time of the sanitary inspection above referred to, and reported in detail in the annual report of the Health Commissioner for the fiscal year ending April, 1886. In many of these wells the water was found to contain five, ten, twenty or thirty or more grains of chlorine to the gallon.¹ And as there is no salt normally found in our subsoil here, this chlorine can only be accounted for on the supposition of sewage contamination, though the largest amounts may probably have been the result of "salt-ing" the well to improve the water, according to a popular prejudice. The record of the cholera epidemic of 1866-7 show that "the whole force of the epidemic was spent upon those parts where the houses and the people were unclean, and well-water was in most frequent use." (Sanitary Survey of St. Louis, 1884, p. 46.)

Though a strenuous effort was made to secure the closure of the contaminated wells in the city in 1885, and some of the wells on public streets were closed under an ordinance passed by the Municipal Assembly, these ordinances were repealed in the fall of the same year under pressure from those who felt that their business interests were interfered with, and now an expensive chemical analysis of the water is necessary before any well can be declared a nuisance and the owner be compelled to abate the same.

It will be many a year before it can be said of the city of St. Louis, even the thickly settled portion of it, as is true of the city of Brooklyn, New York, at present, that it has only one well within its boundaries, and that has water which chemical analysis cannot condemn.

In the parts of the city which are not closely built up, which

1. Water containing more than 20 mgr. of chlorine per litre (1.2 grains per gallon) derived from other sources than a saline subsoil should be rejected. [Chemical Analysis: Beilstein-Curtman.]

are rather rural or suburban than urban in character, there are many wells of which the water is not only palatable but hygienically unexceptionable; and many residents are provided with cisterns which by painstaking in securing that roofs shall be thoroughly cleansed before water is allowed to run into them, furnish an excellent quality of water for drinking. The main question which I desire to bring forward in this paper, however, relates to the character of the water supplied to the closely settled portion of our city through the water mains.

As to the adequacy of the supply it may be said that it is practically inexhaustible and depends solely upon the efficiency and extent of the pumping facilities of the waterworks.

An analysis of the water in August, 1883, gave the following results :

	grains per gallon.					
Chloride of sodium,	-	-	-	-	-	0.835
Sulphate of soda,	-	-	-	-	-	2.452
Sulphate of potash,	-	-	-	-	-	0.625
Sulphate of lime,	-	-	-	-	-	1.653
Carbonate of lime,	-	-	-	-	-	4.808
Carbonate of magnesia,	-	-	-	-	-	2.209
Alumina and oxide of iron,	-	-	-	-	-	0.547
Silica,	-	-	-	-	-	1.452
Total.	-	-	-	-	-	14.561
	pts. per mille					
Free ammonia,	-	-	-	-	-	0.016
Albuminoid ammonia,	-	-	-	-	-	0.088

Nitrates were not found in appreciable quantities.

This would show that so far as chemical tests avail to determine the potability of water, that which is supplied to the citizens of St. Louis is entirely satisfactory. An examination made in the summer of 1885 is said to have shown the presence of a quite noticeable amount of nitrates, and although it is quite exceptional that any such indication of sewage contamination has been detected in this water, it is evident to all that with the constant growth of the city northward, and the rapid development of manufacturing interests in that section of the city, it is only a matter of a very limited length of time when the quantity of sewage emptied into the river above the intake tower of the

present waterworks will be such as to cause a serious contamination of the water supply of the city. An extension of the waterworks system is in progress now, which is intended to obviate this source of danger by removing the low service station, by which the water is pumped from the river to the settling basins, to a point six miles farther up the river.

That sewage contamination of even a large stream of water may be a source of the gravest danger to those dependent for their water supply is evidenced by the experience of our sister city of Cincinnati during the last year when, in all the leading restaurants a common sign upon the walls was "Boiled Ice Water," since the people had come to know that danger lurked in the cup unless its contents had been sterilized by boiling.

Chas. F. Wingate, sanitary engineer, in a paper read before a sanitary convention in Philadelphia, takes the position that the filtration of water for drinking purposes is a vital necessity. He states that "the poison of typhoid fever has been conveyed twenty-five miles by a river and communicated to forty hospital patients who drank its waters."

Domestic filters, in order to be of any reliability, must be of simple structure and so arranged as to be readily cleansed; and this cleansing must be thoroughly and carefully attended to at frequent intervals. As "eternal vigilance is the price of liberty," so constant watchfulness and attention to the filter is the price of sanitary safety for those who must depend upon domestic filtration of their drinking water.

But I have become convinced from observation and study of this important subject during several years past that there is a possibility of securing for our city a much better supply of drinking water than that which is as yet furnished to our citizens, and one which would avoid the necessity of making use of domestic filters at all, so far as the public water supply is concerned.

At a meeting of the St. Louis Medical Society in the early summer, Dr. Hornsby read a paper, urging the advantage of utilizing the waters of the Meramec river as a water supply for our city. I am fully convinced that a far better plan for adoption by our city government would be the addition of an efficient

system of filtration to the present proposed extension of the waterworks.

As regards the practicability of such filtration, Mr. Wingate in the paper above referred to says:

“It is capable of demonstration that the water supply of the largest cities, no matter how great its volume, can be effectually and economically filtered. There are to-day in use in many industrial establishments in this country and elsewhere, including paper-mills, breweries and others which consume enormous quantities of water (one manufactory alone using 48,000 gallons per hour) filtering appliances which have borne the test of years of trial, and which are delivering large volumes of filtered water, of a purity, transparency and general quality which would astonish the average water drinker in our principal cities and towns.”

I suppose that Mr. Wingate here refers to the Hyatt system of water purification by continuous coagulation, filtration and automatic aeration secured to the Hyatt Pure Water Company by letters patent.

A considerable number of these Hyatt filters have been in successful operation in St. Louis for several years past in laundries, hotels, etc., and have demonstrated their efficiency in clarifying and purifying our river water.

Among others, the city of Atlanta, Georgia, has introduced this system of water purification; and the Report of the Atlanta Board of Health for 1887 gives a most satisfactory report of the success of the work. There are twelve filters with a guaranteed capacity of 3,000,000 gallons in twenty-four hours, the cost of which, including the construction of a clear water basin with a capacity of 350,000 gallons, was \$55,000. A private letter from the superintendent, W. G. Richards, kindly forwarded to me by L. B. Nelson, Chairman of the Water Committee of the City Council of Atlanta contains the following particulars of interest:

“The filter plant at the Atlanta Water Works was put in and started about one year ago, and has been in successful operation ever since. We have not pumped to the city a gallon of unfiltered water since it started. The filters have steadily done all

that the builders proposed they would do. The character of the water in the impounding reservoir is muddy, sometimes very muddy, but when filtered is always clear and sparkling, not only clear of coloring matter, but free from albuminoid ammonia, of which there is a large per cent before filtration. The population is 60,000. The distribution of water mains is generally in the center of the city, and even where it is distributed in other sections, the ordinary well water is much used for drinking, as the well water in this section is usually good, and cooler than the city water. Outside of the distribution, which does not cover more than one-third of the territory within the city limits, the ordinary well water is used. I know of no ill-health that has been attributed to the quality of the water used, certainly, the quality of the city water is all that can be desired. It is asked, 'is it as perfect in its action now as in the commencement?' Yes, it is a new filter every time it is washed, and I see no reason why it should not last as long as the metal of which they are made. They are new every day, and if they give satisfactory results one day, they will give the same results every day. There may be other systems just as good and costing less money, but I do not see how it would be possible to obtain better results."

Our neighboring city of Belleville, Ill., has adopted successfully the same system of water-purification, their supply being derived partly from springs and partly from a creek, the water of which is similar to that of most creeks flowing through a prairie country, very turbid in time of freshet, and containing organic matter washed in from the cultivated soil on either side of the creek.

I am satisfied that the application of this system to the water supply of our city would be vastly less expensive, more efficient and more practicable than any aqueduct or pipe system for bringing water from the head waters of the Meramec, or any other plan for providing a supply of pure clear water for our city.

CASES FROM PRACTICE.

CITY HOSPITAL REPORTS.

BY H. C. DALTON, M. D., SUPERINTENDENT.

A CASE OF FECAL FISTULA.

BRANSFORD LEWIS, M.D., ASSISTANT SUPERINTENDENT.

James McGorlick, aged 65, Irishman, married, laborer, was admitted Oct. 18, 1887. As a surgical clinic was then in progress, he was carried immediately to the amphitheatre.

The appearance of the left inguinal region indicated the presence of an abscess containing pus. There was considerable swelling, redness, pitting on pressure and acute tenderness of the affected parts. The patient was stupid, and no clear history of the progress of events could be obtained from him. He said that the tumor had been coming on for three weeks; that he first noticed a prominence which would recede on his lying down, and reappear when he would assume an erect position. Constipation was a marked feature, but had been relieved by purgatives. Nothing pointed to traumatism as a cause.

An incision was made into the tumor at about its centre, where it was softened and pointing. A small amount of pus and a large quantity of fluid feces spurted upward. It was determined, by examination, that adhesions bound the gut to the abdominal wall and would prevent peritoneal infection. The cause of the fecal abscess could not then be ascertained.

In dressing it, provision was made for catching all the discharge in a large pad of oakum. The next few days found the patient much relieved; the amount of fecal matter—evidently from the ileum—gradually lessened, and for a time it looked as though the opening would close. But this contraction of the fistula aggravated the tissues into renewed inflammation, and it became necessary to

maintain the patency of the canal. Afterward it again became smaller and on Nov. 21, the patient went out against advice.

On Nov. 24, he returned to the hospital in the same condition—one fairly good, considering his age, and the quantity of intestinal contents escaping continuously. There was no fecal odor connected with the latter now. At the same time, formed movements of the bowels were had almost daily.

In probing the fistula Dec. 21, what seemed to be a foreign body was felt, imbedded in the tissues between the anterior superior spine of the ilium and the ilio-pectineal line. Later, at the clinic, Dr. H. H. Mudd enlarged the fistulous tract, grasped the body and withdrew the entire "wish-bone" of a chicken. This had been the cause of localized intestinal inflammation and agglutination to the neighboring portion of the abdominal wall, perforation and abscess.

For a time the amount of discharge and irritation of the parts were increased, but with cleanliness and frequent dressings, both gradually subsided. The fistulous opening closed, and, after a week or so, reopened spontaneously, several times during the next few months.

The patient constantly regained strength, and, feeling able to work, was discharged at his own request, May, 24, 1888, on condition that he would return at intervals to keep us posted as to his condition. Nothing has been heard of him since.

HAIRPIN TAKEN FROM THE VAGINA AND RECTUM.

BY G. T. BARTLETT, M.D., POPLAR BLUFF, MO.

[*Read before the S. E. Missouri Medical Association, at Fredericktown, May 3, 1888.*]

On the 11th day of March I was called to the country to see Mrs. —, aged 23, a grass widow. Had had two miscarriages, the last one a year ago, when her mental faculties were much disturbed by the abandonment of her husband while in this critical condition. Had hysterical delirium. At times acted like a wild maniac, tearing her clothing to pieces, and pulling her hair out, and wholly disregarding everything in the way of personal pride. After the miscarriage her mental faculties were restored to a normal condition, and her general health seemed good, except now and then a constipa-

tion of the bowels. A week or ten days before I was called an abscess formed about one inch from the anus, to the right of the median line of the perineum, and another on the right side of the labia pudendi. The patient was suffering very much and was confined to her bed. The day that I was called her mother discovered the protrusion of a foreign substance that she at once recognized as the end of a hairpin at the first abscess near the anus.

On my arrival at 3 P. M., I found the patient disinclined to give any satisfactory history of herself and her connections with the hairpin or of its peculiar situation, or how it got there. She was in great pain and had not rested, or slept but very little for four or five days. I was unable to make an examination on account of the parts being very sensitive. I gave $\frac{1}{4}$ grain of sulph. morphiae hypodermically, and in a few minutes she was sleeping soundly. I had no physician present to assist me. I therefore proceeded to give an anesthetic which she took readily and soon fell under its influence when I examined per vaginam and rectum.

I found a small portion of one prong imbedded in the vagina and the arched portion in the rectum, one end passing out at the abscess near the anus, and by palpation I found a fluctuation at the other end terminated in the large abscess at the right of the labia pudendi. The rectum was filled with fecal matter, constipated, above the curvature of the pin. I seized the pin by the curved portion or middle, and forced it downward, letting the free end protrude, until I was able to bring the arched portion by version through the anus and then withdraw the entire pin.¹ I then opened the abscess on the labia pudendi; about one ounce of pus escaped. I ordered a poultice of flaxseed meal for the first night, afterward simple treatment. The patient made a speedy recovery.

The history of the case is obscure; as the patient has no inclination to talk, and I believe she is ignorant of how the hairpin was adjusted and for what cause it was placed in the vagina or rectum. My theory, and I am sure it is a correct one, is that during her hysterical delirium, while unconscious, and in pains of premature labor, while the os uteri was dilated, the arched end of the pin was carried into the uterus through the vagina, and the two flexi-

¹The hairpin as shown to us by Dr. Bartlett just as removed from his patient measures three and one-half inches from point to bend and the two points are one and one-half inches apart.

ble ends slipped from her grasp and became imbedded in the walls of the vagina, and at the expulsion of the child one end was forced through the walls of the vagina and rectum, and for one year has gradually forced its way to the position that it was found on my visit to the patient, as described above.

FACIAL PARALYSIS ASSOCIATED WITH EAR TROUBLES.

BY ROBERT BARCLAY, M. D.

[*Read before the St. Louis Medico-Chirurgical Society, May 1, 1888.*]

CASE I.—FRACTURE OF THE BASE OF THE SKULL; BILATERAL FACIAL PARALYSIS; FRACTURE OF BOTH TYMPANA AND RIGHT EXTERNAL AUDITORY CANAL; RUPTURE OF MEMBRANÆ TYMPANORUM; INTERNAL STRABISMUS; DEAFNESS; CURE, WITH NORMAL HEARING.

J. C., an American, æt. 37 years, a switchman, was first seen by me December 3, 1887. On October 22 last, while he was making a coupling, some timbers projecting from one of the cars, caught his head and pinched it up against the other car; this produced a fracture of the base of the skull, involving both ears. When first seen by his physicians there was free hemorrhage from both ears, more profuse from the right one. The left auricle was contused and abraded. Movement of the jaw was painful. There was internal strabismus of both eyes. The left side of the face over the jaw, and the right side over the parietal bone, were much swollen. Patient vomiting. He remained apathetic, not thoroughly conscious, restless and sleepless. Bowels were costive; pulse slow and irregular; expectoration of old blood and mucus. He "wants to sleep" all the time. There are sordes of the mouth and lips. Ears discharging. These were cleansed with a solution of corrosive chloride of mercury, and then dressed antiseptically with iodoform gauze, etc. There was profuse purulent discharge from the left ear on Nov. 6. He could not approximate his jaws nor chew on Nov. 9. On Nov. 10, facial paralysis became marked on both sides. These were the facts as recorded up to Dec. 3, when he was first seen by me, and the following aural lesions made out: transverse

rent of right membrana tympani above malleus; wound of anterior superior and posterior inferior quadrants of left membrana tympani; otorrhea, both sides. Boracic acid insufflated. Dec. 17, improving greatly; discharge from ears diminished. Dec. 20, no aural discharge; hearing improving. January 9, hearing and facial paralysis much better; patient can move his eyelids; the superior wall of the right external auditory canal is found fractured and irregular. The small perforation of the left membrana tympani, which seems persistent, was closed on January 18 with collodion flex, and a sized paper disc. Hears ordinary voice in both ears at 25 feet. Two weeks after this the patient with normal hearing, was discharged cured.

CASE II. FACIAL PARALYSIS FROM SUSPECTED OTITIS MEDIA;
PROBABLY DUE TO LOWERING OF TEMPERATURE BY SYRING-
ING AND EXPOSING EAR; DESQUAMATIVE OTITIS EXTERNA;
RECOVERY.

J. A. W., an American, æt. 31 years, a station-agent and telegraph-operator, applied for treatment April 12, 1888.

His physician, suspecting necrosis of bone, with deep seated inflammation in some part of the ear, referred him to me for an expert examination of this organ. A grave prognosis has been expressed as regards recovery from the facial paralysis.

Seven years ago, while cutting his third molar teeth, cerumen in considerable quantity, the patient says, formed in his ears. The attendant pruritus induced him to pick at the ears with a pin, which produced otitis media purulenta on both sides. His left ear discharged for two weeks, and has never done so since. The right discharged for one month, when a post-auricular abscess formed, which opened spontaneously at a point low down on the mastoid process. Ever since this healed, which was very soon afterward, he has several times a month syringed his ears. He complains that at times the ear gets stopped up and painful, at which time whistling produces diplocoia. Syringing gives relief from these symptoms and brings away a whitish material. For the past two weeks he has been syringing his ears several times a day, and insufflating boracic acid, neglecting to close the meatus afterward with a cotton wool wad. At times he has intense headache "on top of his head," which gradually settles over his right eye; this has been more frequent of late. For awhile he used a "pain killer," bought

of a travelling "doctor" (!), which is supposed to have contained sassafras oil, laudanum and aqua ammoniæ; this he applied over the scalp. The upper lip on right side swelled, and the corresponding half of the face, including the orbicularis palpebrarum, became paralyzed on March 31.

There is difficulty of deglutition, the lips will not accommodate, and the pharynx seems to drift toward the left side on deglutition. He hears watch in right ear $^{24}/_{48}$; in left, $^{30}/_{48}$. Whisper is heard at 12 feet and lowest voice, in right ear. The tuning-fork test gives no indication of ear disease. The membranæ tympanorum are almost normal, perhaps a trifle duller on the right side. The canals are the seat of *otitis externa desquamativa*. The patient is married, his family healthy. His family physician has kindly written me that there has never, to his knowledge, been any syphilitic contamination, and no evidence of it can be found. There is no history of exposure to cold or damp. The ears were carefully cleansed. On May 10, the patient wrote that his paralysis grew steadily better of itself, without treatment, after he left me, and that he had, ere writing, regained full control of his face again; this was verified at a subsequent visit from the patient.¹

RECTAL TEMPERATURE.—Dr. Simon Baruch urges the importance of ascertaining the rectal temperature especially in treating infants. "So deceptive are the cool skin (especially of the extremities) and the clammy sweat produced by relaxation consequent upon the nausea, vomiting and diarrhea, that the high internal temperature is liable to escape observation.

"Since I have, during the past eight years, made it an invariable rule to ascertain the exact rectal temperature, I have again and again been surprised by the presence of hyperpyrexia when I least expected it."—*Med. News*, July 7, 1888.

1. It may interest those who heard this report and its discussion to know that the patient wrote to Dr. Barclay on July 10, that the ointment since recommended for the desquamative otitis externa [hydrarg. oxid. rubr. gr. x to vaseline ʒj] had entirely relieved him of pruritus auris, and that he has been free of headache since beginning its use. Ed.

EDITORIAL.

HEATING AND VENTILATION OF SCHOOL BUILDINGS.

Some months ago we published in the *COURIER* a series of papers on "School Hygiene" in the course of which the subject of heating and ventilation was accorded considerable space.

In a paper read before a sanitary convention in Philadelphia and recently published as a part of the annual report of the Pennsylvania State Board of Health, Dr. D. W. Jefferis, of Chester, Pa., gives a description of a system of heating which a personal letter received from him assures us has proved thoroughly efficient and satisfactory.

The system is essentially as follows: There are placed in the basement of the building large heaters or more properly air warmers varying in number according to the size of the building. These are built of heavy iron so as to be durable and are patterned after the locomotive boiler—tubular—so as to furnish a large radiating surface and retain the heat of the burning fuel as long as possible. To them the outside air is fully admitted. It is heated to a temperature of about 125° and rises through brick flues to the school-rooms above, entering through ample registers. These are so arranged that the teacher can by simply moving a hand upon a dial regulate its admission to this extent. She can admit the hot air as it comes from the heater or can partially or wholly shut off the hot air and admit an equivalent amount of cold air, but she cannot lessen the influx of air into the room.

The fresh warm air rises to the ceiling gradually forcing downward the air contained in the rooms and out through ventilators

placed under the windows. This position is chosen for the ventilators because there is always more or less downward movement of air there, as the windows are never completely air-tight and the air in contact with them is cooled from the outside. This air now contaminated but still at a temperature of 60° to 65° passes directly under the floor which is laid on furring strips on purpose to afford space for this. This keeps the floor always dry and warm. In the basement there are foul air gathering rooms, from which the air passes to the ventilating flue built in the smoke stack. Another feature of the arrangement for this school is the disposal of the closets. These are placed between the foul air gathering rooms and the ventilating shafts, and are so arranged that the warm, dry air passes through the closets over the deposits on its way to the ventilating shaft, and as it sweeps up the big chimney carries with it all the moisture and bad odor of the excreta, leaving behind it only a small quantity of inodorous material which may readily be thrown upon the fire in the furnace and burned without causing any bad odor or characteristic smell at all.

During the summer months a free circulation of air is secured by small furnaces built in the base of the smoke stack.

Doubtless many of our readers, whether or not officially responsible for any of the arrangements for the school buildings in their respective localities, will be as much interested as we have in knowing of a thoroughly efficient and practical system of school ventilation. There is no reason why the same principles may not be equally as effective in securing the same result in hospitals, asylums and other public buildings.

A personal letter from Dr. Jefferis assures us that the expectations and promises with regard to the heating and ventilation of the High School building have been fully realized, and that much to their surprise the cost of fuel last year was much less than in those rooms in adjoining buildings heated by direct steam without ventilation. "The dry closet system," he says, "is worth the whole cost of the apparatus."

A copy of *Medical Science* recently received contains an interesting account of the results obtained by the application of the same system in the school buildings of Parkdale, Canada. The fecal matter in the closets was converted into a material which burned readily just like the buffalo chips so commonly used for fuel on the plains. The account of the burning out of this dried material at the close of the school year is given by *The Mail* as follows:

"A little coal oil was poured through the opening in the closet seat on the first pile (the one farthest from the ventilating shaft), to assist in igniting the mass. A match readily started it burning, the flames being drawn toward the other piles by the draught toward the ventilating flue, and burning steadily the same as a coal fire. One hour and a half afterward the total mass was reduced to a small pile of ashes, which shortly afterward an attendant swept up, when the brick floor receptacle of the closet was as clean as a freshly swept parlor. Even while the process of cremation was proceeding there was no smell emanating from it that could be noticed in the building, the ventilation being absolutely perfect. The first to be burned out was the boys' department, which, as we before said, was completed in an hour and a half, and no less a success attended the burning of the girls' department, which was accomplished in even less time. With no water pipes to freeze, no direct outlet from the sewer into the house, as is provided by the ordinary water closet plan to let the deadly sewer gas constantly into the building, and no repairs to make, as is necessary with the water closet system, the Smead system of dry closets has proved itself to be the system for use in public school buildings, because it provides a system of closets in an apartment within the building, the air in which is at all times as pure and sweet as it is on the outside, and thus prevents the danger arising from the use of closets outside of the building through passing from a warm to a chilly outside air."

QUACK ADVERTISEMENTS IN RELIGIOUS NEWS-PAPERS.

The Medical and Surgical Reporter is making a vigorous and at the same time temperate and judicious assault upon the common practice of religious newspapers of allowing their columns to be used for the purpose of advertising quack medicines, many such advertisements being of a character which any man of common sense would know to be absolutely and unblushingly false, such as sure cures for deafness, cancer, fits, consumption, etc.

The ventilation of the subject undertaken by the *Reporter* has not been altogether unavailing. A copy of the editorial of December 31, 1887, on that subject was sent to the editor of nearly every religious journal in the country, and the editor by personal correspondence has endeavored to secure the cooperation of the self-respecting religious papers in rectifying this wrong.

In another editorial dated Aug. 18, 1888, the editor of the *Reporter* states that a few of the religious papers have expressed themselves satisfactorily on the subject. He calls attention to the action of the Arkansas State Medical Society on this subject (vid. Aug. COURIER p. 190) and the approval of this action by the A. M. A. He notes also that a representative religious body, the General Assembly of the Presbyterian church, received and indorsed an overture of like character.

Still much remains to be done. Many of the prominent religious papers continue to publish advertisements which are palpably false and dishonest as well as those which are immoral.

Regarding its course in the future the *Reporter* writes as follows:

"We appreciate the good work done by religious papers, and it is for this reason that we wish to see them freed from a reproach which interferes with their usefulness and injures the cause of religion. We have tried to bring this about in a way which should not give needless offense. But, as we believe that no reform is

ever accomplished without somebody being hurt, we shall not hesitate, when next we take this subject up, to lay our hands on particular religious papers and say plainly to the editor of each: "Thou art the man."

"We do not now take this step, because we hope that some to whom this charge would apply to-day will clear themselves before the time arrives to make it."

We sympathize most fully with our brother editor in this crusade which he has undertaken, and pledge him our hearty support and cooperation.

Several of our St. Louis religious weeklies are by no means free from blame in this matter. We trust they will consider the matter in the true light and place themselves right in precept and in practice.

COOLING BATHS IN SUMMER DIARRHEA OF INFANTS.—Dr Baruch where there is an elevated temperature, as he has general found to be the case in summer diarrheas of infants strongly advocates the use of the graduated cold bath, reduced from 95° F. to 80° F. and continued until the thermometer in the rectum registers a decided fall of temperature. He says that this has given him results which no other remedy has afforded him.—*Med. News* July 7, 1888.

AMERICAN THERMOMETERS.—The verdict of the Yale University Thermometric Bureau is that the best clinical thermometers of American manufacture now compare favorably with those of the best foreign manufacturers both in the smallness of the amount of the required corrections and in their uniformity throughout the scale. The managers of the observatory report that there is yearly a gradually increasing number of thermometers examined, and it is doubtless in no small degree due to these examinations and to the certificates issued that we owe the improved quality of American thermometers.

BOOK REVIEWS AND NOTICES.

A TREATISE ON DISLOCATIONS, by LEWIS A. STIMSON, B. A., M. D., Professor of Clinical Surgery in the University of New York, etc. Illustrated, Philadelphia, Lea Brothers & Co., 1888. 8vo., pp. 539, sheep, \$4.00. (St. Louis; Simpson & Co., J. H. Chambers & Co.)

An excellent book, the best in the language on the subject, more complete than Hamilton's classic work, which had devoted to the subject 310 pages; this gives over 530 pages.

The arrangement is the usual one of treating of dislocations in general first, then of special joints. There is also the division of traumatic, congenital and spontaneous. While some of the definitions are verbose, yet they aim to be accurate.

Two months is given as an average period after which a dislocation is unfit for reduction, but now, with antiseptic precautions, the joint may be exposed and the obstructing tissues divided and removed; thus these cases are more amenable to treatment at present than formerly. In a recent case the surgeon who proposes to open a dislocated joint, should wait, if possible until the reaction following the original traumatism has ceased. The pathological anatomy of dislocations is now so well understood that, where formerly the muscles were supposed to be the chief obstacle to reduction, 'tis now known that the ligaments play the most, certainly a very important, role, so that manipulation serves where once great force was employed. An anesthetic is not always required, but when used ether is preferred to chloroform. An interesting chapter on the accidents that may attend reduction is given, closing with reference to proportionately the large number of deaths from use of an anesthetic, especially of chloroform, compared with other operations, of which no satisfactory explanation has been given.

Of the pathological anatomy and complications of dislocations we are pleased to note two facts: first, that marked inflammation and suppuration never follow ordinary dislocations, or if peradventure the ordinary process of repair is disturbed by inflamma-

tory complications, one cause among others given for this may be "passive motion injudiciously begun and maintained." The first fact is important as combatting the idea of some that joint disease is due to a traumatism or local injury, even though the general constitution be perfect. We believe in the rule of a predisposing cause lighted up, it may be, by local injury.

If it were not so, the joint disease would be the usual accompaniment of dislocation because of the injury inflicted on the capsular ligament and other articular structures, and yet our author does not so much as hint that it is so. The chief reason that more serious results do not follow such severe lesions as occur in dislocations is that the lacerations are subcutaneous.

The remark that "passive motion injudiciously begun and maintained after reduction of dislocation may do injury," was recently illustrated in our practice. A lad met with an accident, producing posterior dislocation of the elbow and some injury to the internal condyle. A local surgeon reduced the parts and soon after instituted passive motion. A month having passed and the movements remaining limited, and the joint enlarged and painful and hot, I was consulted and expressed an opinion that inflammation was being kept up by the passive movements. Once give the parts quiet and improvement would soon be apparent.

The hindrance to reduction in the special dislocations, notably the ligaments, are dwelt upon and well illustrated by wood-cuts. In fact illustrations are used wherever the text can be made more explicit; some are recognized as old friends come down to us from former generations, borrowed from Cooper and other ancient authors. We could have wished that the photographic process had been invoked for correct illustration.

No surgeon or general practitioner can be without this work on his table for study and reference. We are proud that it has fallen to an American to produce such a complete reflex of the facts bearing on this important branch of surgery.

A. J. STEELE.

A SYSTEM OF OBSTETRICS BY AMERICAN AUTHORS. Edited by BARTON COOKE HIRST, M. D., etc. Vol. I. 8vo. pp. 803. Philadelphia, Lea Bros. & Co., 1888.

This volume contains eight articles by different authors. The first of these "The History of Obstetrics," is from the pen of our

friend and fellow-citizen, Dr. Geo. J. Engelmann, and is a carefully prepared and interesting presentation of the subject, for which the preparation of his "Labor among Primitive Peoples" had given him special advantages.

The section on "The Physiology and Histology of Ovulation, Menstruation and Fertilization; the Development of the Embryo," is prepared by Dr. H. Newell Martin, of Baltimore. It is a very complete and exhaustive paper, and profusely illustrated, many of the illustrations being prepared from original sketches.

The section on "The Fetus: its Physiology and Pathology," by the editor of the volume, to some extent covers the same ground as the preceding one, both papers considering the development of the placenta, for example. The latter paper, however, is more practical in its character, dealing with the pathology of the fetus and its consequences in abortion, etc.

The next section is prepared by Dr. W. W. Jaggard, of Chicago, and deals with "Pregnancy: its Physiology, Pathology, Signs and Differential Diagnosis" in a thorough and exhaustive manner.

Dr. Samuel D. Busey, of Washington, D. C., contributes a section on "The Physiological and Clinical Phenomena of Natural Labor," a most thoroughly practical paper.

"The Mechanism of Labor and the Treatment of Labor based on the Mechanism," by Prof. R. A. F. Penrose, is a paper in which he presents the principles which he has taught from the professorial chair for the last twenty-five years. He makes six positions for the head, instead of the customary four positions. The conclusion of this section, on the Management of the Third Stage of Labor, is added by the editor.

Dr. J. C. Reeve, of Dayton, O., discusses the subject of Anesthetics in Labor, giving a historical sketch of its introduction and its advocacy by different obstetricians in different countries. The anesthetics considered are chloroform, chloral, bromide of ethyl and cocaine. The editor adds a few paragraphs upon the use of ether as an anesthetic in labor.

The closing section of the work is by Prof. T. Parvin, of Philadelphia, on the "Anomalies of the Forces in Labor," and includes a consideration of a considerable number of fetal monstrosities.

This volume forms one half of the American System of Obstetrics, which is the companion to the American System of Gynecology.

cology, edited by Dr. M. D. Mann, and published by the same house, which is bringing out this work. The first volume of each part is now in the hands of the subscribers, and the complete work will be one which all who practise in these departments will do well to have in their libraries.

THE LANGUAGE OF MEDICINE, a Manual giving the Origin, Etymology, Pronunciation and Meaning of the Technical Terms found in Medical Literature, by F. R. CAMPBELL, A.M., M.D., etc. New York, D. Appleton & Co., 1888. 8vo., pp. 318; cloth; \$3.00. (St. Louis, J. L. Boland; J. H. Chambers.)

As the author says in his preface, "the object of this work is to provide the medical student with a suitable means of acquiring the vocabulary of his science."

Very little observation in college class rooms or halls of medical societies is necessary to convince any one that there is a discreditable amount of carelessness, not to say ignorance, by physicians in the use of the technical language of the profession.

The same thing would be apparent by a very casual inspection of the prescription file of any drug store, either of city or country; and still stronger evidence is presented on the pages of every medical journal, to say nothing of the manuscripts before they have undergone editorial revision.

This undeniable fact is by no means creditable to the members of a "cultivated profession," and this little volume will be a great help to those who have not had the advantage of a thorough preliminary training before undertaking the study of medicine. Nor will it be useless to those who are college graduates. We are all apt to become careless as to the refinements of diction and pronunciation, and it is a helpful stimulus to read a volume like that which Dr. Campbell has supplied to us.

Prof. O. W. Holmes is said to have introduced a course of lectures to the medical class of Harvard University by remarking that, if the young men noticed any peculiarities in his pronunciation of words, it was not worth while for them to take the time to look up the word in the dictionary, but they should adopt his method without further research, as he had made that subject a special study.

We have not followed this course with regard to Dr. Campbell's book, but wherever we found that his pronunciation of a word was different from that to which we had been accustomed, we have

taken the trouble to look up the authorities, and in almost every case we found that the author was correct.

There are some few instances, however, with regard to which we cannot accept the dictum of the author. For instance, the word *echinococcus*, according to the rules which he himself gives, should have the short sound of *i* in the second syllable, instead of the long sound, as he has marked it. *Quaternary* is accented by Worcester and Thomas on the second syllable, and this seems to us preferable to the accenting of the first syllable, as given by Dr. Campbell.

Nor can we see any reason for his preference for the short sound of *i* in the last syllable of the word *uterine*, as authority and analogy both favor the long sound.

A few other literal or verbal inaccuracies should be mentioned. The word *attrahens* is repeatedly spelled *atrahens*. On page 104 the word "intensive" is used where "privative" was doubtless intended. On page 61, Rule V., exception 1, the word "succeeded" in the first line should be "preceded." A few other little oversights in proof-reading were noted in perusing the volume, but are not of sufficient importance to demand attention here.

The work is a most valuable one, and we should be glad to know that it was in the hands of every medical speaker and writer.

AN ILLUSTRATED ENCYCLOPÆDIC MEDICAL DICTIONARY, being a dictionary of the technical terms used by writers on medicine and the collateral sciences in the Latin, English, French and German languages, by FRANK P. FOSTER, M. D. Vol. I., with Illustrations, New York: D. Appleton & Co., 1888, 4to, pp. 752; sheep.

We have received the first volume of the dictionary to which for the last eight years Dr. Frank P. Foster, editor of the *New York Med. Jour.*, has given so much of his time and energy, and in which he has been ably assisted by an efficient corps of collaborators.

The work is more than satisfactory. It is a surprise, so far superior is it to anything of the kind that has been done or attempted in this country, or for that matter in Europe, either.

In the matter of definitions it will be found most complete and exhaustive. In pronunciation of Latin words, with regard to which there is so much irregularity among physicians, Dr. Foster gives the preference to the English method, "because this dictionary is designed chiefly for the use of persons who commonly speak the

English language." But he also gives the Roman method, as being "the one now taught in the leading universities of the country," and that which "will doubtless be adopted everywhere within a very few years."

With regard to orthography there is little to criticize. We do, however, question the propriety of one point. If it be best to retain the Latin diphthongs in the English nouns of Latin derivation we can see no good reason for dropping the diphthong in the adjectives formed from these same nouns. For ourselves we believe that the general tendency of the times is toward the discarding of the diphthong, and such is our practice in both nouns and adjectives.

The part of the publishers in the preparation of this work merits the highest praise. Neither expense, nor labor, nor skill have been spared in presenting an exceptionally perfect specimen of book-making. Paper, typography and binding are all of the very best.

The result is a work which is not only highly creditable to editor, collaborators and publishers, but does honor to the profession and to our country. It should be on the table of every physician who reads, or writes or speaks on medical subjects, and every true physician should do all three of those things.

REFERENCE HANDBOOK OF THE MEDICAL SCIENCES. Edited by ALBERT H. BUCK, M. D., etc. Vol. VI. New York: Wm. Wood & Co., 1888, 4to, pp. 778, cloth.

This volume continues the admirable work in the same excellent style which we have found in the preceding ones. This volume commences with the title "Prairie-Itch," and ends with "Tep-litz-Schoenan," and includes many valuable articles. The editor and publishers are fully redeeming the promises made in the announcement of this work. It is invaluable to the physician.

PROCEEDINGS OF THE STATE SANITARY CONVENTION, held at Philadelphia, May 12, 13, 14, 1886, under the auspices of the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania. Extracted from the second annual Report of the Board, Harrisburg, 1888, 8vo., pp. 230; paper.

This volume contains a large number of very interesting and valuable papers on sanitary subjects, and constitutes a valuable contribution to the literature of this department of science. Such sanitary conventions are of the highest utility in raising the stand-

ard of general intelligence upon sanitary affairs without which it is vain to seek to accomplish any valuable work in the way of reform.

OPHTHALMIC SURGERY by ROBERT BRUDENELL CARTER, F.R.C.S., etc., and WM. ADAMS FROST, F.R.C.S., etc. Philadelphia, Lea Bros. & Co., 1888, 16mo., pp. 554, cloth, \$2.25. (St. Louis, J. H. Chambers & Co.)

This is another fairly good book upon the eye that is offered to the public.

The most interesting chapter is that upon the Anatomy and Physiology of the Eye.

We notice that he advocates tapping the sheath of the optic nerve in "choked disc," also that he states that the gonococcus is found in all purulent discharges from the conjunctiva.

An objection we would make to the book is that the diseases and conditions described are so numerous as to be somewhat confusing to the student, and are not complete enough to be of much benefit to the oculist.

M. H. Post.

PARTIAL SYLLABIC LISTS OF THE CLINICAL MORPHOLOGIES OF THE BLOOD, SPUTUM, FECES, SKIN, etc. By EPHRAIM CUTTER, M.D., etc. New York, published by the author. 1888. 8vo., pp. 81.

This is a contribution of Dr. Cutter to the study of the microscopical forms found in the various secretions of the body in health and disease. Dr. Cutter is an enthusiast in this department of research, and has done much to promote the use of the microscope for clinical research. He holds that "the morphology of healthy blood is a most rigid test, and in delicacy and far-reaching goes beyond any of the other physical signs."

THEINE IN THE TREATMENT OF NEURALGIA, being a contribution to the therapeutics of pain. By THOS. J. MAYS, M. D. Philadelphia, P. Blakiston, Son & Co., 1888. 16mo., pp. 84, boards, 50 cents.

This essay, which first appeared in the *Polyclinic*, is a thorough and careful study of the agent under consideration, and it is a valuable contribution to therapeutic literature.

THE PHYSICIAN'S BEDSIDE RECORD. By GIDEON C. SEGUR, M. D.

These little pamphlets form a most convenient method of keeping a clinical history of cases of illness. Each pamphlet contains space for a minute record of pulse, temperature, respiration, medi-

cine, etc., for each hour during twenty-eight days. It is intended to use a book for each patient, and they are so prepared with stiff manilla paper covers as to be readily filed for reference. They are manufactured and sold by the Plimpton Manufacturing Co., Hartford, Conn., at the moderate price of fifty cents per dozen. These are the most complete blanks for records of this sort that we have seen.

CAMP HYGIENE.—This is circular No. 27, issued by the Pennsylvania State Board of Health, addressed to medical officers of the National Guard of Pennsylvania. It is a series of admirable suggestions in concise and clear diction with reference to sanitary points to be observed in the arrangements for the annual encampments of the state militia which are held regularly in that state. Drs. Edwards and Lee have prepared herein an excellent little manual.

UNIVERSAL HEALTH CODE. By EDWARD PLAYTER, M. D. Ottawa. Published by author 1887. 24mo., pp. 16, paper.

This is an admirable little pamphlet, with suggestions as to personal and domestic hygiene which would do much good if read and observed by all our patients. We should be glad to see the little manual widely distributed. The same matter is also published on cards, 14x22 inches, to be hung up in public places.

BOOKS AND PAMPHLETS RECEIVED.

BOOKS.—Photographic Illustrations of Skin Diseases, by Geo. Henry Fox, M. D. Nos. 5 and 6. New York. E. B. Treat and Co.—Atlas of Venereal and Skin Diseases, by Prince A. Morrow, M. D. No. 6, New York, Wm. Wood & Co.—Clinical Atlas of Skin and Venereal Diseases, by R. W. Taylor, M. D., Philadelphia, Lea Brothers & Co., 1888.—System of Obstetrics by American Authors, edited by Barton Cooke Hirst, M. D., Philadelphia, Lea Bros., 1888, 8vo., pp. 808, sheep.—Encyclopedic Medical Dictionary, by Frank P. Foster, M. D. New York: D. Appleton & Co., 4to. Vol. I, pp. 752; sheep.—The Language of Medicine, by F. R. Campbell, A. M., M. D., etc. New York, D. Appleton & Co., 1888. 8vo.; pp. 318; cloth, \$3.00. (St. Louis, J. L. Boland; J. H. Chambers.)

PAMPHLETS.—Announcement of the Twenty-ninth Annual Course of Instruction at the Miami Medical College of Cincinnati, 1888-9.—Forty-seventh Annual Announcement of the St. Louis Medical College, Col-

legiate Year 1888-89.—College of Physicians and Surgeons in the city of New York. Medical Department of Columbia College, 1888.—Second Annual Report of the Doshisha Hospital and Training School for Nurses, in connection with the A. B. C. F. M. Mission, Kyoto, Japan, April, '88.—1888-89 Annual Announcement and Catalogue of the College of Physicians and Surgeons, Baltimore, Md.—Announcement of Gross Medical College of Denver, session 1888-9.—Beaumont Hospital Medical College of St. Louis, Annual Announcement, session 1888-9.—Ninth annual Announcement and Catalogue of the Northwestern Medical College St. Joseph, Mo. Session of 1888-9.—University of Maryland. Eighty-second annual circular of the School of Medicine, session 1888-9.—New York Post Graduate Medical School and Hospital. Seventh annual announcement, 1888-9.—Rectal Insufflation of Hydrogen Gas, etc., by N. Senn, M. D., Ph. D., etc. (Journal of the A. M. A., June 23-30, '88.)—Announcement for 1888-89 of the Medical and Dental Departments of the National University, Washington, D. C.—Exophthalmic Goitre by Augustus A. Eshner, A. M., M. D. (Prize essay Jefferson Medical College.)—Second annual announcement of Systematic Courses in Ophthalmology and Otology. Illinois Charitable Eye and Ear Infirmary, Chicago, Ill.—Missouri Agricultural College, bulletin No. 35. or station bulletin, No. 2.—Grasses for Pastures and for Meadows.

NUTRITION OF THE INSANE.—Dr. John B. Chapin, Physician in Chief to the Department for the insane of the Pennsylvania Hospital, in his annual report says: Sixteen ounces of solid food are said to be required daily to sustain the average workman in a state of health. Much more than this can be taken and assimilated and seems to be actually needed to sustain the system during an attack of acute maniacal disease. There must be a compensation for the rapid waste of tissue that takes place to sustain the patient during an attack of insanity attended with exhaustion, and in addition a quantity of food must be administered with tonic medicines that will more than make good the constant loss, and add to the actual weight. The quantity of food that has in some cases been administered and assimilated has amounted to several pounds daily for weeks continuously. In one case the food administered averaged 172 ounces with a gain in weight of 58 pounds; in a second case, 137 ounces daily were taken with a gain in weight of 29 pounds; in a third 188 ounces with a gain of 20 pounds; in a fourth 154 ounces with a gain of 42 pounds. All of these cases made good recoveries.

REPORTS ON PROGRESS.

MEDICINE.

BY L. T. STEVENS, M. D.

Hyper-Arterial Tension.—DR. BRAMWELL, (*Edinburgh Med. Jour.*, March 1888) contributes a study in hyper-arterial tension, a condition which is found associated with a very great variety of diseases, sometimes as an effect, sometimes as a cause, and sometimes as a complication. Blood poisons, either introduced from without, as ergot of rye, or formed in the tissues, as in gout, produce higher arterial tension than normal. In some acute diseases, such as cholera, scarlatina, diphtheria, we find this condition marked, while in typhoid the tension is low; but when albumen appears in the urine, indicating the presence of intercurrent parenchymatous nephritis, the pulse is transformed into one of hyper-tension. Dr. Galabin has shown that certain specific poisons have an elective affinity for certain organs, producing in one instance low pulse tension, in another high. Hyper-arterial tension is met with more as a physiological than a pathological condition in one or two aspects; first, in athletes while training, the heart is often found in a state of simple hypertrophy, with arterial tension above normal; and again in pregnancy the same condition is often found, but in both these cases the heart and arterial tension return to their normal standard after the strain is over. The author then goes on to enquire into the causation of this increased arterial tension in some of the following diseases; renal affections, acute and chronic atheroma of the vascular system, angina pectoris, diseases of the blood and anemia, acute diseases. The relation between acute kidney disease and high arterial tension is by most men regarded as cause and effect. In acute catarrhal nephritis there occurs at once increased blood pressure, this being brought about by an obstructed condition of the renal circulation, by the presence of in-

flammatory exudations, and after a time a third factor comes into play, the blood becomes spanemic from retained metabolic products, and thus the renal circulation is still farther impeded. If this condition be of short duration matters soon return to their normal state; if otherwise, degenerative changes ensue. In scarlatina when the kidney becomes inflamed, the arterial tension is often very high, there is considerable strain put upon the heart, and if compensatory hypertrophy does not set in, death ensues, either from uremic convulsions or from cardiac dilatation engendered by intense retrograde strain. All forms of chronic Bright's disease are not associated with high tension, it is rarely met with in amyloid disease. The author thus goes on to argue against the arterio-capillary fibrosis theory of Gull and Sutton. Next the question of angina pectoris is considered. It has been described as an agony engendered by ischemia of the cardiac muscular structure, the blood supply being suddenly cut off, actively or passively by vascular spasm, and as a consequence, a paroxysm of angina pectoris ensues; the good results produced by such remedies as amyl-nitrite, nitro glycerine, and sodium nitrite tend to strengthen this view. In the treatment of hyperarterial tension our remedies must be drawn from the following; nitro-glycerine, nitrite of amyl, sodium nitrite, spiritus etheris nitrosi, potassium bromide; purgatives, such as pulv. jalap. co.; diaphoretics, as pilocarpine, vapor baths, and warm pack; blood letting, general and local; dietetically, skim or butter milk in quantity. In a case of simple nephritis from cold, or one produced by a specific poison—such as scarlatina—the very best treatment is abstracting blood in quantity at the onset of increased arterial tension. In some cases of threatened apoplexy, where the patient is the subject of general atheroma, it is sometimes necessary to bleed, but often the administration of a dose of nitro-glycerine will answer the same purpose. In chronic nephritic diseases, when the tension is high, and that in a large measure from persistent organic changes in the arteries and heart, the administration of nitro-glycerine is also useful, together with the employment of free purgation and the hot-water pack. As a diuretic much benefit is derived from the use of large quantities of skim milk. In cholera collapse, high arterial tension is best treated by atropine and morphia injected deeply into the tissues. Broadbent has drawn attention to cases of certain individuals in whom there is a tendency to faulty metabolism, culminating now

and again in a quasi-angina paroxysm, although there is no existing organic disease; these cases are best treated by venesection or by giving nitro-glycerine and following up the treatment with careful dieting and attention to hygienic rules. The same author has also pointed out the risk that fat people run of apoplexy when they try to reduce themselves by avoiding hydro-carbons, and living chiefly on lean meat; in these cases the blood becomes loaded with an excess of albuminoid compounds which tend to heightened arterial tension.—*London Med. Rec.*, April 1888.

Abdominal Massage in Habitual Constipation.—DR. BUELER, of Berne, lays stress on the fact that massage is not simply one therapeutic agent, but a combination of several factors powerful for good or evil, according to circumstances. The physiological effects of massage are said to be: 1. The mechanical action, the most important of all, which is not limited to the gastro-intestinal contents, but extends also to the large abdominal glands, removing obstruction of their ducts, etc. The most powerful mechanical effects are produced by kneading and stroking. 2. The reflex effect of massage must be admitted, in view of the physiological fact that, on simply touching the abdominal wall, a contraction of the intestinal muscular coat always follows. This effect is best produced by slapping with moderate force. 3. The thermic action of massage, as proven by observations of surface temperature, a rise of $\frac{1}{4}^{\circ}$ to 3° C. occurring after a sitting and lasting for 3 or 4 hours. To obtain the greatest thermic effect, dry manipulations (without oiling the parts, or, still better, with a rubbing glove) are recommended. 4. The chemical action, which is more hypothetical. It is supposed that abdominal massage, while causing marked hyperemia of the local integuments, gives rise *eo ipso* to arterial anemia, with venous hyperemia of the peritoneum and relative accumulation of CO_2 in the intestinal circulation leading to increased peristalsis. The problem for the physician in each case is to find out which of the therapeutic elements of massage is the most promising, and this question being settled, the procedure can be simplified greatly by omitting all unnecessary manipulations. The author condemns a routine practice of massage in all cases without discrimination; manipulations, which lead to a rapid cure in one case, may be followed by injurious consequences in another. Constipation associated with weak abdominal muscles, requires different treatment

from that dependent on intestinal atony. In cases of constipation caused by dyspepsia and sometimes complicated by gastric dilatation, manipulations are limited to the gastric region; as certain experiments have shown, the epigastric rubbing empties the stomach under the manipulating hand. The author localizes massage in a corresponding way, also in cases of fecal accumulation in the cecum and sigmoid flexure. In three of the author's patients large piles were present; in every case the size was greatly diminished after the very first sitting, the swelling disappearing completely and permanently in 4 weeks, before the constipation. The most disappointing results are obtained in cases of constipation depending on adhesions left by previous attacks of peritonitis, local or general. He thinks there is such a thing as keeping up the ice-bags and opium too long in the treatment of peritonitis, and regards it as more rational to resort to a gentle *effleurage* as early as possible after the disappearance of acute symptoms.—*Brit. Med. Jour.*, May 19, 1888.

Value of the Tubercle Bacillus in Clinical Diagnosis.—DRS. KIDD AND TAYLOR presented a communication to the Royal Medical and Chirurgical Society, the object of which was to emphasize and illustrate the value of the sputum test when systematically applied to all cases of disease of the respiratory organs in which other recognized methods of clinical investigation failed to indicate a definite diagnosis. The detection of the bacilli in such cases was often extremely difficult, requiring repeated examination; success depended largely on the judicious selection of the sample of sputum, the method of preparation and staining, and careful examination with suitable appliances. The cases described numbering over 90, fell into five main groups:

1. No physical signs of disease of the respiratory organs.
2. Laryngeal disease of uncertain nature, without definite pulmonary signs.
3. Signs of bronchitis with or without emphasis.
4. Signs of pleurisy.
5. Signs of doubtful impert—(a) anomalous physical signs, (b) slight signs at apex, (c) signs confined to or most marked at the base.

The tubercle bacillus had been proved to be of little use for purposes of prognosis.

In the discussion which followed, Dr. C. T. Williams said that the divisions of the cases were exactly the same that he had made in his recent book on Pulmonary Consumption, except that he had two additional minor groups in which examination of the sputum may be useful, in cases of pyrexia and wasting without any physical signs of disease of lung, and in some senile cases where bronchial catarrh masked tubercular disease. The bacteriological part of the subject should never interfere in the least with the careful examination of all previously available physical signs. In diagnosis of laryngeal disease he thought sputa examination of great value, and perhaps of even greater value in cases of bronchitis and emphysema where the tubercle was masked by the other diseases. He did not agree with the conclusion that the bacillus was of little use in prognosis. That the results were disappointing, he would allow, but the bacillus was sometimes important in cases of arrested phthisis in whom the process might come on again; it might be of special importance in giving or refusing medical consent to marriage.

Dr. Herm had paid some attention to the inferences in prognosis to be drawn from frequent examination, and he thought they were of great importance. If he found a case in which the number of bacilli remained small during several weeks of examination, he thought the prognosis much better than one in which the number remained steadily large, and this, though he might never have seen the patient. Dr. D. Powell thought the bacilli of but little use in prognosis. He had sometimes known the physical signs to come before bacilli.—*Brit. Med. Jour.*, May 26, 1888.

Pleurisy as a Predisposing Cause of Phthisis Pulmonalis.—DR. B. F. WESTBROOK, of Brooklyn, divides the cases of pleurisy antecedating the outbreak of phthisis into five classes:

1. Those in which a pleurisy with effusion, occurring in a person in apparently good health, is immediately followed by evidences of pulmonary tuberculosis which usually runs a rapid course to its fatal termination. In such cases the pleurisy is undoubtedly tubercular in origin.

2. Those in which a sero-fibrinous pleurisy is followed by a slow development of fibroid phthisis. Whether this is due to a simple extension of a low grade of chronic inflammation from the pleura to the interlobular and peribronchial connective tissue, or is the re-

sult of a very chronic tubercular process is not fully ascertained. But the final occurrence of distinct tuberculosis in such cases is to be looked for.

3. Those in which an acute or sub-acute attack of sero-fibrinous pleurisy, terminating in complete recovery is followed after some months by the development of tuberculosis in one or both apices. They are usually observed in persons who are either constitutionally weak, or whose health has been injured by overwork, dissipation, or other debilitating influences.

4. Those occurring usually in middle age or the decline of life, in which a sero-fibrinous pleurisy has become chronic, and in which absorption has not occurred on account of the density of the false membrane covering the lung and diminished pliability of the chest walls; and in which tuberculosis developed generally after a long time, either in the lungs alone or in a general disseminated form.

5. Those cases of empyema the appearance of which antedates the occurrence of tuberculosis.

The author cites cases illustrative of these classes, and from the whole draws the following conclusions:

1. That sero fibrinous pleurisies, apparently simple in origin and terminating in complete recovery so far as the local manifestations are concerned, may be followed after the lapse of a few months by the development of phthisis pulmonalis.

2. That, in all probability, the pleurisy in these cases acts as a predisposing cause of the tuberculosis.

3. That primary sero fibrinous pleurisy may result in fibroid phthisis, with the subsequent occurrence of tuberculosis pulmonum.

4. That fluid effusions remaining in the chest for a long time may finally so interfere with the nutrition of the lungs or of the body at large as to render it liable to tubercular infection, either local or general.

5. No case of pleurisy should be neglected. After apparent recovery, great care should be taken that the health of the patient is completely restored before he is lost sight of by the physician. When there is a family history of phthisis, still greater pains should be taken. In patients arrived at middle life, when the general mobility of the thorax is apt to be somewhat diminished, effusions should not be allowed to remain in the cavity of the chest for more than two or three weeks. If the fluid accumulates after as-

piration, this should be frequently repeated, and at moderately short intervals. When the fluid is reabsorbed, but there is dullness and feeble respiratory murmur at the base, the patient should be kept for a long time on the most efficient tonics and alteratives, with very liberal diet and plenty of out-door exercise. Respiratory gymnastics or the use of the pneumatic cabinet is especially indicated.—*New York Med. Jour.*, June 9, 1888.

Respiratory Hysteria.—The *Journal de Medecine* of May 6 contained a paper on this subject by HENRI HUCHARD. He has already remarked how frequently simple laryngitis, angina pectoris, or bronchitis is transformed into aphonia, spasmodic contraction of the esophagus or hoarse, sonorous cough; symptoms which antiphlogistic treatment entirely fails to combat, but which disappear spontaneously. M. Petit describes a case of pulmonary hysteria which M. Huchard regards as one of hemoptysis of hysterical origin. The spasms may be localized in the nose, the larynx, the diaphragm, the bronchial tubes, etc. The author quotes cases of spasm of hysterical origin in the respiratory organs, when tracheotomy was resorted to, but without modifying the symptoms. He points out the difficulty, and at the same time the importance of determining the exact relations between hysteria and the affections of the respiratory organs without confusion. In the second stage of consumption a sonorous, incessant cough will appear quite suddenly followed by aphonia, hemoptysis which usually recurs at the menstrual period, complete and persistent anorexia, and in some cases irrepressible vomiting which may last for months or even years; the pulmonary lesions, however, are not aggravated; all the pathological activity is monopolized by the hysteria. In other cases tuberculosis predominates and hysteria plays merely a subordinate part. Brachat affirmed that hysteria favors the evolution of tuberculosis; other authors have stated that tuberculosis determines the presence of hysteria. Both these conclusions are erroneous. Without entirely admitting the truth of Leudet's theory that phthisis and hysteria are mutually antagonistic, Huchard affirms that in many cases he has observed that the combination of the two affections in the same patient changes the habitual aspect of each of the affections. In tuberculous hysterical patients there is a complete disparity between the relatively mild, local condition, and the serious character of the functional disturbance. The consequence is that

errors in diagnosis may often arise. It is most important to distinguish the effects of hysteria and tuberculosis respectively in the same patient, and to determine exactly which symptoms are due to each affection.—*Brit. Med. Jour.*, June 16, 1888.

Pulsus Paradoxicus.—DR. P. B. SMITH, Aberdeen, reports a case of pericardial effusion which presented the interesting sign pulsus paradoxicus. This is a pulse whose beat becomes enfeebled or absent on every inspiration, returning at the commencement of expiration. In a lecture based upon this case, he speaks as follows concerning this sign: The most frequent cause of it is an indurative mediastino-pericarditis, an inflammation of the pericardium and anterior mediastinum which results in the formation of fibrous bands connecting the posterior surface of the sternum with the prolongation of the pericardium along the great vessels, by which the aorta and other great vessels are compressed, during the act of inspiration by elevation of the chest with the result of not only weakening or obliterating the pulse, but also of producing inspiratory engorgement of the veins tributary to the superior vena cava. It is also well known to occur in large pericardial effusions and in a few other diseases interfering with respiration, such as stenosis of the trachea. When it results from effusion it is supposed to be due to pressure on the venæ cavæ especially during expiration so that the heart contains less blood at the beginning of inspiration than at the commencement of expiration.—*Brit. Med. Jour.*, April 7, 1888.

The Oral Whiff.—DR. CHEESMAN has met with five cases of this curious physical sign, among which is that of a gentleman of 38, in excellent health, who, in sitting down after exertion, observed that the sound of his breathing, particularly in expiration, was intermittent, giving a puff at each beat of the heart, the series of whiffs being represented by the sounds hute, hute, hute, hute. These were loudest at the beginning of expiration and became fainter towards its close. The interruptions in inspiration were similar but less marked. As the action of the heart quieted down, the phenomenon became less and less noticeable, till it finally ceased. The chest proved to be healthy, but on forced exertion the sound was plainly heard by the ear held about a foot from the patient's open mouth. The stethoscope on the chest could not distinguish it, but over the trachea it came out loudly, and had the character already

described. The gentleman continues perfectly well. The only account that the author can find of such a sign is in descriptions of Dr. Drummond's "oral whiff" in aortic aneurism. The value of this whiff as a sign of intra-thoracic aneurism must depend on its association with other physical signs of that disease. It would certainly appear to be wrong to conclude with some authorities that the oral whiff occurring during physical and mental quietude is of itself evidence of aneurism.—*N. Y. Med. Rec.*

Treatment of Pyrexia with Phenacetin.—DR. H. O. GREUFELL reports 10 cases of elevated temperature occurring in a variety of diseases in which phenacetin proved itself possessed of undoubted antipyretic properties. The action of the drug begins within half an hour after administration, and is quite prolonged; the patient generally perspires freely and feels drowsy; no bad after-effects were observed; on the contrary, the patients always said that they were more comfortable after it. It possesses also analgesic properties and was used in neuralgia with good results.

It is a substance analogous in chemical composition to antifebrin, is a slightly reddish, inodorous and tasteless powder, definitely soluble in water, insoluble in acids and alkalies, slightly soluble in glycerine, dissolved most readily in hot alcohol. The most satisfactory dose for an adult is about eight grains; children bear it well.—*The Pract.* 1888,

Cascara Sagrada in Rheumatism.—DR. H. T. GOODYWIN reports most satisfactory results with this drug in the treatment of 30 or more cases of rheumatism. As far as can be gathered from the paper which generalizes, the cases were characterized rather by pain in muscle or joint than by swelling, although in one case, swelling of the joints is spoken of as occasionally occurring. In some the salicylates and iodide of potassium had been previously given without much effect. The dose was 10 to 20 drops with glycerine and water three times a day. Improvement took place usually within 24 hours, and progressed rapidly toward recovery.

The author is unable to account for this action of the drug. Another peculiarity of cascara, which the author mentions casually, is its failure to exert its cathartic effect in phthisical patients even when given in dram doses thrice daily.—*N. Y. Med. Jour.*

Tar Water as a Hemostatic.—In a Paris letter to the *N. Y. Med. Jour.*, of June 9, 1888, mention is made of the benefits, as stated

by Dr. St. Marc to be derived from the use of distilled tar water in all forms of hemorrhage. It is made by mixing $2\frac{1}{5}$ pounds of tar, $4\frac{1}{2}$ pounds of saw dust of pine wood, and 12 quarts of water, and distilling off six quarts of liquid. It is of a clear color and strong empyreumatic odor, provokes sneezing, has a slight astringent taste, and gives a sensation of heat to the mouth and throat. The dose is about two ounces in the 24 hours to stop any form of hemorrhage, such as that from gastric ulcer, the epistaxis seen in chlorotic girls, and that of hemophilia or congestive metritis. Its success is not certain, however, in carcinoma. In hemoptysis occurring in the first and second stages of phthisis it has produced considerable benefit.

Hypodermic use of Nitroglycerine in Heart Failure.—DR. M. H. FRISSELL, of Philadelphia reports several cases of cardiac failure of that severity that death seemed imminent, in which subcutaneous injections of two drops of a one per cent solution of nitroglycerine produced prompt relief. The treatment has the great advantage that it is harmless in any event, and that it acts more rapidly than other methods.—*Med. and Surg. Report.*, June 2, 1888.

Erythrophleine.—DR. L. LEWIN read a paper, January 11th, 1888, before the Medical Society of Berlin, concerning a drug that promises much. Dr. Lewin thinks it will probably supersede cocaine.

The Hydrochloride of Erythrophleine is readily soluble in water. A two per cent. solution in a dog's eye renders it insensible for 10 to 24 hours. This solution is much stronger than need be for anesthetic uses, for Dr. Lewin states that "solutions of the strength of one-fourth or one-tenth or one-twentieth of one per cent. produce anesthesia of the cornea and conjunctiva, continuing from several hours to two days, gradually decreasing in intensity during that time. The action is altogether local, and if a solution be injected into the eyelid of an animal, this becomes so insensible that touch does not induce motion, while the eye itself retains perfectly its sensibility.

If of a solution of the proportion of $\frac{1}{10}$ gramme to 100 grammes of water, (approximately $\frac{3}{8}$ of a grain to one fluid ounce or about $\frac{8}{100}$ of one per cent) we inject three drops into the eye, full anesthesia is produced, *i. e.* by 0.00015 gramme (.0023 grain) erythrophleine hydrochloride. If from 0.0005 grammes to 0.0015 grammes

of this solution be injected into a guinea-pig, such an insensibility is produced in the injected part that one can cut these otherwise so sensitive animals deeply, down to the muscles without observing any symptom of pain.

"In frogs which have been tetanized, no further tetanus can be produced upon the injected point. After an injection of erythrophleine in a limb, it can be pierced without any reaction. After a subcutaneous injection of an amount equal to one-fourth of a hypodermic syringe of a two per cent solution, such an insensibility is produced in these animals in about fifteen minutes at the point of injection, that touching them with concentrated sulphuric acid, or with a red-hot needle, is not felt."

"I, myself, dropped into a wound in my finger, which had been caused by glass and was very painful, a few drops of a two per cent solution, and the pain which had before that been persistent and had increased with pressure, ceased after about ten minutes, and could not be re-established by the firmest pressure. This analgesy persisted for about an hour, and could be continued by entire days."

As to the general constitutional effect of this drug, Dr. Lewin says but little, except that in therapeutic doses it has a "digitalinic effect upon the heart."

His investigations began in an attempt to determine the source of the "Haya poison," used by the natives of western Africa as an arrow poison, and, little by little, his experience led to the assurance that it was prepared from the erythrophleum.

Mr. G. I. McKelway, of Philadelphia, has nearly all of this alkaloid there in the United States, and that is comparatively little. He expects a larger quantity, and as Mr. Merck is preparing it on a large scale, and as the bark from which it is extracted is plentiful and cheap, we are likely to have plenty at reasonable rates. It is worth now about \$1.00 per grain. Solutions of say one-half grain to the fluid-ounce would seem to be about the proper strength for use in the eye. Before much of it is injected into the circulation more should be known of its constitutional effect, especially with reference to the heart. See article on "Erythrophleum" in both *Wood, Remington & Sadtler's Dispensatory* and in *Stille & Maisch's Dispensatory*.

Salicylic Acid Mixture.—DR. IRA B. FIELD in a paper on Acute Articular Rheumatism gives the following formula as being as efficacious as, and more palatable than any other:

R _y	Acid salicylic,	-	-	-	-	-	-	3iij
	Sodæ bicarb.,	-	-	-	-	-	-	3ij
	Aquæ destillat,	-	-	-	-	-	-	3ij
	Syr. sarzæ,	-	-	-	-	-	-	3i

M. Sig. Teaspoonful three times a day.—*Gaillard's Med. Jour.*, June.

For Infantile Laryngitis.—DR. J. SIMON directs the following:

R _y	Tr. aconiti rad.,	-	-	-	-	-	-	gtt. x
	Tr. belladonnæ,	-	-	-	-	-	-	gtt. x
	Aq. laurocerasi,	-	-	-	-	-	15 grammes	(3ss)
	Aq. aurantii flor.,	-	-	-	-	60	"	(3ij)
	Aq. tiliæ,	-	-	-	-	60	"	(3ij)
	Syr. simp.,	-	-	-	-	30	"	(3i)

M. Sig. Teaspoonful doses. If the child does not sleep give a teaspoonful of syrup of codeia., provided the little one be weaned.—*Nouv. Reméd.*, Feb. 8.

Pills for Facial Neuralgia.—DR. LABORDE uses the following formula:

R _y	Quiniæ sulph.,	-	-	-	-	-	20 cgr.
	Aconitin. nitrat., (cryst.)	-	-	-	-	-	$\frac{1}{4}$ mgr.
	Pulv. quinquinæ	-	-	-	-	-	q. s.

For one pilule. Give four or five such pilules in twenty-four hours taking care to put at least an interval of four hours between doses.—*Nouv. Reméd.*, Feb. 8.

Injection for Fetid Suppuration of Uterine Cancer.—DR. CHIRON recommends

R _y	White vinegar,	-	-	-	300 grammes	(3lxxs.)
	Tincture of eucalyptus,	-	-	45	"	(3iss.)
	Salicylic acid	-	-	1	"	(gr.xv.)
	Salicylate of soda	-	-	20	"	(3v.)

M. Sig. One to five soup-spoonfuls a day in a litre of warm water to be used for vaginal injections.—*Nouv. Reméd.*, Feb. 8.

Dysentery.—DR. H. S. CRABB finds the use of iodoform a valuable adjunct in the treatment of dysentery after the bowels have

been emptied of any irritating contents by a saline cathartic and tormina and tenesmus have been at least partially allayed by opiates, preferably in his opinion paregoric in doses of one half to one dram. The local anesthetic effect of iodoform allays the pain and subdues the local inflammation. He regards the bichloride of mercury in doses of one sixteenth to one-eighth of a grain as one of the most valuable agents in the treatment of this disease.—*Med. Bulletin*, Feb. 1888.

Dyspnea of Phthisis.—DR. S. F. LANDRY finds nothing better for this distressing symptom of the consumptive patient than quebracho in doses of ten drops of the fluid extract followed by a remedy recommended by a writer in the *British Medical Journal* for cardiac neurasthenia, viz :

R _x	Quiniæ sulph.,	-	-	-	-	-	gr.xxiv.
	Mist. camphoræ, ad.,	-	-	-	-	-	℥vi.
	Acid hydrobrom, dil.,	-	-	-	-	-	℥ij.
	Tr. digitalis,	-	-	-	-	-	℥ss.
	Syr. aurantii,	-	-	-	-	-	℥i.
	Tr. nucis vom.,	-	-	-	-	-	℥ii.

M. Sig. Half ounce three times a day well diluted with water, hot water if the patient is easily chilled.

It may be used for several days, but then an interval of freedom from taking should intervene, lest the cumulative effect of digitalis may occur.—*Med. Bulletin*, Feb., 1888.

Nitro-glycerine for Headaches.—DR. TRUSEVICH, after a careful study of this drug concludes that all cases which depend on a vaso-constrictor neurosis, are immediately curable by nitro-glycerine. When the cerebral anemia is due partly to deficiency or poorness of the blood, milk, iron, arsenic, quinine and other tonic remedies are, of course, required in addition to the nitro-glycerine. The chief indications for the treatment of migraine by nitro-glycerine are pallor of the face and a paroxysmal character of the pains, also their augmentation on pressure of the carotids, and their diminution when the head is lowered.—*London Lancet*.

Elixir Paraldehyde.—DR. A. B. COOK thinks highly of paraldehyde, which on account of its unpleasant taste is best given as an elixir, containing 10 or 25 per cent of the drug. The former

strength contains 45 minims of pure paraldehyde to the ounce of elixir, or about $5\frac{1}{2}$ minims to the dram. The latter contains 15 minims to the dram. When diluted with water the elixir is palatable, non-irritating to the pharynx and stomach and is not followed by any of the disagreeable effects of other anodynes and hypnotics.

He regards it as a perfectly safe remedy without danger of causing congestion of brain or other organs, or paralysis of the heart. He finds it to be a heart tonic, diuretic, slightly laxative and hypnotic, causing natural sleep undisturbed by dreams or phantasms, with no subsequent disturbance of digestion.

In addition to its efficient hypnotic action he has found it to act pleasantly and efficiently in the treatment of various other neurotic affections among which he instances cases of asthma, puerperal eclampsia. He depends upon this instead of other opiates and anodynes in expectorant mixtures for adults and children in cases of pneumonia, bronchial and pulmonary catarrh and annoying night cough.

In nervous cough from irritation of the mucous membrane of the respiratory tract; in the insomnia attending convalescence from fevers or phthisis, or that due to cerebral excitement, brain exhaustion, etc., he has found paraldehyde to act most satisfactorily.

He states that a satisfactory elixir cannot be made by simply adding paraldehyde to simple elixir. It must be dissolved in order to secure union and permanency.—*Progress*, Jan., 1888.

Pills for Melancholia.—DEFOE recommends the following formula for administration to nervous women affected with attacks of sadness or melancholy:

R Zinci valerianat.,
Quinix valerianat.,
Ferri valerianat., - - aa 1 gramme, (grs.xv.)
Mucilag, q. s.

Div. in pill. No. xx.

Sig. A pill before the two principal meals.—*L'Union Méd.*, Feb. 7, '88.

Treatment of Asthma.—DR. G. BARDET recommends the administration three times daily before eating of five to ten centigrammes extract of euphorbia pilulifera dissolved in simple syrup and cherry laurel water and water of lactuca. [As we have no correspond-

ing preparation of lactuca, the syrup of lactucarium might be substituted for the simple syrup.] In lieu of this he suggests ten to thirty drops of the tincture of euphorbia pilulifera in a little sweetened water.

At the time of the asthmatic paroxysm he directs the inhalation from a handkerchief of 4 to 8 drops of iodide of ethyl.—*Les Nouveaux Remèdes*, March 24.

Green Diarrhea of Infants.—PROF. HAYEM administers after each nursing one to two teaspoonfuls of the following:

R	Acidi lactici,	-	-	-	-	2 grammes (℥ss.)
	Syr. simplicis,	-	-	-	-	25 “ (℥vj.)
	Aquæ destillatæ,	-	-	-	-	75 “ (℥iiss.)

Care must be taken to disinfect soiled clothing with a concentrated solution of boric acid or of 1 to 1,000 corrosive sublimate solution.—*Les Nouv. Rem.*, March 24.

For Constipation in Infants.—DR. SMITH recommends the following:

R	Ol. morrhuæ,	-	-	-	-	20 grammes.
	Aquæ calcis,	-	-	-	-	20 “
	Syr. calcis lacto-phosphatis,	-	-	-	-	10 “

M. Sig. One-quarter to one-half teaspoonful after each meal.—*Le Nouveaux Remèdes*, Feb. 24.

Myalgia.—A note in the *Medical Record* April 21, recommends the following:

R	Chloral hydrat,					
	Gum. camphoræ,	-	-	-	-	aa ℥ss.

Mix well till liquid and add lanoline ℥i.

M. Sig. Rub well over painful parts.

For Nephritic Colic.—DR. H. HUCHARD recommends the following:

R	Sodii benzoati,					
	Lithii carbonatis,					
	Ext. stigmat. maidis,	-	-	-	-	aa gr. xlv.
	Ol. anisi,	-	-	-	-	gtt. iij.
	Ft. mass. Div. in pill No. XL.					

M. Sig. Four pills daily.—*Les Nouveaux Remèdes*, Nov. 24.

Acetanilid (Antifebrin) in Typhoid Fever.—P. C. SMITH commends most highly this agent in treating typhoid fever. He does not find that it shortens the course of the fever but that it does make the patient more comfortable, and relieves him of many troublesome symptoms, reducing the temperature and notably relieving the violent frontal headache. In children of one or two years old this drug in doses of a half grain will cause a fall of temperature of two to three degrees. In adults he gives never more than three to five grains to commence with, which dose he has never found to produce collapse or cyanosis.

After the first dose, if the temperature is reduced below 101° F. he does not repeat the dose until the temperature rises above 102°, generally, of course in the evening.—*Glasgow Medical Journal*, April, 1888.

Antineuralgic Ointment.—GALEZOWSKI recommends the following to be applied to the painful spot in cases of neuralgia:

R̄	Menthol,	-	-	-	-	-	-	-	0.75.
	Cocaine,	-	-	-	-	-	-	-	0.25.
	Chloral hydrate,	-	-	-	-	-	-	-	0.15.
	Vaseline,	-	-	-	-	-	-	-	5.

Vomiting of Infants.—DR. ATKINSON advises to avoid giving alcoholic stimulants to young children if possible. If a stimulant is absolutely necessary, give aromatic spirits of ammonia. For the vomiting of small children with dyspepsia give of carbolic acid gtt.j. in lime water ℥i. one teaspoonful to as much milk every two or three hours.—*Phil. Med. Times*, March 15.

Bronchitis in Elderly Patients.—WOODBURY considers twenty minim doses of dilute phosphoric acid, along with elixir of cinchona of good service in bronchitis of elderly people. If there is much cough, give also syrup of wild cherry.—*Ibid.*

Bursa Pastoris (Capsella B. p.), [Shepherd's Purse].—Most efficacious hemostatic.—This plant, after enjoying high recognition from the medical profession during the 15th, 16th, and 17th centuries, gradually fell into officinal disuse during the 18th—continuing meanwhile, however, in uninterrupted favor as a popular remedy in the families of the country folks. A few years ago, Dr. von Ehrenwall, of Ahrweiler, Germany, during his country

practice, noticed the excellent styptic properties of bursa in a case of menorrhagia that had resisted all other medication. Dr. v. E.'s experiments, since instituted, have demonstrated to his satisfaction that the dry herb is devoid of virtue, (which probably was the cause of its previous discontinuance in the pharmacies); but that the juice of the fresh herb is, beyond comparison, the most reliable styptic known to the materia medica,—not even excepting ergot.

Since then the fluid extract has been used internally, in hemorrhages of the lungs, chronic hemorrhage of the kidneys, and in such uterine hemorrhages as justified the use of internal remedies.—The dose was 3-4 tablespoonfuls per day, in a little water.

Meanwhile, bursic acid has been isolated from the herb by the pharmacist Bombelon, and clinical experiments, per os and subcutaneously, with this acid and its alkali-salts are now in progress, in order fully to determine its efficacy and administration.—*Merck's Bulletin*, June 1, 1888.

Ethyl Bromide has had a peculiar history. It was originally received, about 30 years ago, especially in France and in the United States, with high favor and marked hopes of its supplanting all other anesthetics; but in the course of time it dropped into desuetude, principally in consequence of disagreeable, and even fatal, peculiar toxic effects having several times been remarked as following its administration. It appears, however, from later researches (f. i. Dr. J. Asch, Berlin, *Therapeutische Monatshefte*, Feb. 1887), that those deleterious effects were unjustly ascribed to the pure bromide of ethyl, having been due to impurities derived from the ancient method of preparing it by the phosphorus-alcohol-bromine process, which has been in vogue almost since its discovery, and which is still in use for the hydrobromic ether intended for serving merely in the technical arts.—Langgaard and Traub have clearly traced the dangerous toxic properties of the "Ethyl Bromide" thus prepared to certain sulphur and arsenic combinations derived from the crude, impure phosphorus employed in that process.

The modern process, consisting essentially of a reaction between ethyl sulphuric acid and potassium bromide, wholly obviates the objectionable features above described, and furnishes, when properly completed, a chemically pure bromide of ethyl, which alone

is fit for medicinal use.—The odor of the pure ethyl bromide, which should be of a sweetish, chloroform-like character, is of itself a sufficient indication for rejecting all those preparations which have a pungent or repulsive smell, which thereby show their impure composition.

Pure ethyl bromide is an agent of eminent value to the surgeon in small operations; for it there does fully the service which would be done by chloroform (provided anesthesia not exceeding 15 minutes' duration be required), without any of the risks always attached, more or less, to the use of chloroform,—no observation of the heart's action by a second attending physician being needed in the case of ethyl bromide.

Anesthesia by ethyl bromide is of a shallower character than that by chloroform,—generally leaving both consciousness and muscular tension unimpaired, and reaching its zenith within about one minute, so that repeated administrations are necessary in order to make it continue for several minutes. But the inability to perceive pain is nevertheless fully secured during the period of its action.

Recovery from this anesthesia is very easy, and attended with hardly any nausea or dizziness,—the ethyl bromide being rapidly eliminated, principally through the lungs.

Administration by mask, as with chloroform: from 5 to 30 grammes, according to duration required.—*Merck's Bulletin*, June 1888.

Sodium Hydroxide, (caustic soda), pure in drops, is a new form of this substance, recently introduced by me.—*Merck's Bulletin*.

Sulphonal [$(\text{C}_2\text{H}_5)_2\text{C}(\text{SO}_2)_2$].—(Di-ethyl-sulphon-dimethyl-methane.) A new hypnotic, non-narcotic,—as described by Professor Karst in the *Berliner Klinische Wochenschrift*.—Heavy, colorless, prismatic crystals; melting-point, about $130\text{--}131^\circ\text{C}$. Soluble in about 120 parts water at ordinary temperature; more readily in alcohol and in alcoholized ether.

Sulphonal is reported to act hypodermically merely by intensifying or exciting the natural somnolence or soporific inclination, without any narcotic action being perceptible. It is especially eligible in many of those forms of insomnia that proceed from nervous excitement, etc.

Average adult dose; 2 grammes, in powder.

Accessory effects on the heart-action have so far not been observed.—*Merck's Bulletin*.

Terpin Hydrate, (Mono-hydrate; or ter-hydrate of optically inactive terpenes [terpilenes]).—A succedaneum of oil of turpentine, of similar therapeutic effect, but more easily taken and borne.—Colorless, inodorous, rhombic crystals; easily soluble in hot water, in alcohol, chloroform and ether; of neutral reaction.

Terpin hydrate has for several years past proved a remedial agent of unquestionable value in diseases of the respiratory organs, the kidneys, and the nervous system. Lépine and others recommend it as an expectorant in chronic and sub-acute bronchitis, and in the bronchial catarrhs of phthisical and emphysematical patients; likewise as a diuretic in chronic nephritis. He prefers it, in these uses, to oil of turpentine (optically active terpenes).—(Its administration in diphtheria has, so far, proved of little avail.)

Terpin hydrate covers all the classes of cases in which oil of turpentine has been successfully applied; while it has the advantages over the latter of possessing but a very weak aromatic taste, which causes no antipathy, and of producing no gastric troubles even in long continued use. Among the clinical and practical authorities who have indorsed it in these particulars are Dujardin-Beaumetz, Tanret, Sée, Thieu, Decroizilles, and many others. Single dose; 0.2 to 0.4 gramme; maximal daily dose; 1 to 3 grammes;—pills, capsules, or hydro-alcoholic solution. Some authorities, however, have given as high as 0.6-2.0 grammes at a time. The larger doses are said to suppress the excessive secretion in bronchorrhea, thus acting in an opposite direction to the small ones. For promoting diuresis in kidney affections the larger doses are surely indicated.

Vigier's favorite formula is:—Terpin hydr. 5 grammes; 95 % alcohol 20 do.; glycerin 40 do.; (add sugar or not); teaspoonful at a time.

Rabow prescribes the following:—Terpin hydrate 3 grammes; sugar and gum-arabic mucilage, equal parts, sufficient; make 30 pills; 1-4 pills 3 t. p. d.;

Or—Terpin hydrate 10 grammes; alcohol 150 do.: dist. 100 do.; table spoonful 3 t. p. d.—*Merck's Bulletin*, June 1888.

SURGERY.

BY L. T. RIESMEYER, M. D.

Proper Limits of Excision of the Rectum.--To those that hold that nearly all cases of rectal cancer are suitable for treatment by some modification of the operation of excision, Hildebrand's report of the results of this work in Koenig's clinic ("*Deutsche Zeitschrift für Chirurgie*," Band xxvii, Hefts 3, 4) will not be encouraging. While it has been abundantly demonstrated, that very extensive disease may be removed, and the technique of the operation has been so greatly improved that nearly any part of the rectum may be reached and extirpated rapidly and with comparative safety as to the immediate result, the advisability of such treatment has not as yet been established. The operations are done because they are manually possible and surgically justifiable, and because in this way only can the proper limits of operative interference be marked out.

Hildebrand's statistics cover 54 extirpations in 69 cases of disease, with a mortality of 35 per cent., which is higher than might have been hoped for. Moreover, exactly one half of the mortality was due to infection, which only proves that no amount of asepsis or antisepsis can be certainly relied upon to prevent periproctitis. Of those recovering from the operation, thirteen died of relapse and five were suffering from relapse at the time of reporting; but three had lived three years, six over two years, and eight over one year without relapse. A point which is made very plain by this report is that no matter whether the sphincter is or is not preserved in the operation, sooner or later the condition in all cases is one of incontinence or cicatricial stricture.

The result of Hildebrand's study is to convince him that inguinal colotomy is the proper treatment for cases of extensive disease; or, in other words, to place him in opposition to the tendency toward promiscuous operation at present prevailing among German surgeons. It would seem as though conservative ideas as to this matter were certain after a little time to be accepted, and that operative interference must be limited by the extent of the disease, and the amount of involvement of the structures around the rectum, as has been upheld by American Surgeons ever since the operation has been revived, after having for a long period been in disrepute

because its proper field of usefulness was not strictly maintained. The simple facts seem to be that cancer of the rectum is less amenable to the knife than cancer of most other parts; that operation is followed by cure in a very small proportion of cases; that the dangers are great and the results as to comfort very unsatisfactory; and yet that in properly selected cases—those seen early—much good may be done by operation, and in those seen late an astonishing amount of lower bowel may be extirpated without an immediately fatal result.—*New York Medical Journal*, June 2, 1888.

The Surgery of the Ureter.—Several surgeons have recently attempted or suggested different methods of closing, catheterizing, or compressing the ureter. Dr. Tuchmann, of the German Hospital, has constructed a hollow instrument, resembling a lithotrite. The blades are separated when this “ureter forceps,” as he terms it, is introduced into the bladder, and slipped along the base till it touches the posterior wall. On closing the blades, they will grasp the elevated ridge of mucous membrane, representing the very oblique course of the ureter through the vesical walls. By dint of practice on the cadaver, this delicate operation may be performed on the male as well as on female patients.

Fifteen minutes are said to be sufficient for the purpose of keeping the ureter closed while the urine secreted by the opposite kidney runs from the hollow outer blade of the forceps and is preserved for testing. In this manner, not without obvious precautions, the surgeon may discover if one or both kidneys be diseased. Mr. Hurry Fenwick has contrived a ureter aspirator. In one case, at least, he succeeded in blocking the right ureter with clot by means of this ingenious instrument. The patient was a middle aged man, suffering from severe hematuria due to traumatic malignant growth of the right kidney; when the clottage, as Mr. Fenwick termed it, was performed, no distinct tumor could be felt. From the date of the “clottage,” till the patient’s death, six months afterwards, there was no recurrence of the hematuria, which for fourteen months previously had been violent and persistent. Dr. P. Müller has contrived a ureter-compressor, somewhat after the principle of Mr. Davy’s now well-known lever. He took into consideration the anatomical relations of the ureter in its course along the pelvic walls. On introducing the finger into the rectum, feel-

ing for the spine of the ischium, and then passing the finger about an inch and a half upwards towards the pelvic brim, the ureter can there be compressed against the bony wall of the pelvis. In women this compression may be effected through the vagina. Dr. Müller has constructed a special compressor. It forms an angle; the short arm is fixed by a bandage to the thigh after compression, and bears a hinge, so that the instrument may be bent to a convenient angle, whilst the long arm bears a bag at its free extremity. The patient is placed on his side, and the long arm is passed about five inches into the rectum. The bag is left flaccid till it has been properly introduced; it is fitted with rubber tubing, which is placed in communication with a long glass pipe ending in a funnel. About four pounds of mercury are poured into the bag: the ureter is then compressed to the extent of at least four-fifths of an inch. Dr. Müller has effected compression in one instance only on the living subject. He further proposes to compress the ureter against the pelvic brim through the abdominal walls, by means of a pad.

Dr. Axel Iversen, of Copenhagen, has boldly opened the bladder by suprapubic section, so as to inspect the urine as it escaped from both ureters. The patient was a man aged 38; he suffered severely from discharge of purulent urine, which contained no tubercle bacilli, neither was there any swelling or any localized pain, to prove whether the disease were unilateral or bilateral. Calculous pyelitis was diagnosed. The bladder was opened, and its cavity illuminated by the electric light. A continuous stream of pus issued from the orifice of the left ureter. From the right came an almost clear fluid. This was carefully examined and found to contain some red corpuscles, abundance of epithelium from the upper and middle part of the urinary tract and a considerable quantity of hyaline and granular casts. On that account Dr. Iversen gave up all intentions of removing the left, the evidently suppurating kidney, nor did he deem it necessary to perform nephrectomy, seeing that the pus could be seen to flow as freely from the ureter as it would have escaped through a lumbar incision. The patient recovered from this remarkable exploratory operation. The above named surgeons may fairly be considered pioneers in a new and not unimportant branch of surgery. That there remains room for much improvement they would, we trust, be the last to deny.—*Brit. Med. Jour.*

Value of Inspecting the Orifices of the Ureters by Electric Light in the Diagnosis of Symptomless Hematuria and Pyuria.—In the *British Medical Journal* of February 4, 1888, E. HURRY FENWICK, F. R. C. S. gives a description of the electric cystoscope, and in the June 16 number of this journal he reports the three following cases to illustrate the value of inspecting the orifices of the ureters by electric light:

CASE I.—Mr. B. consulted me in January, 1888, in reference to a hematuria. He brought with him a specimen of bloody urine containing much clot. His history was as follows: In January, 1886, he had been out riding for two hours, and came home completely chilled. He passed blood the same evening. He suffered no pain or inconvenience, except a slight urethral tingling when the clots were passing. The hemorrhage stopped in the summer, but recurred in the winter of 1887, to cease once more upon the advent of the warmer weather.

Present condition—"A well-built, anemic man, aged 30. The urine is voided twice a day. No pain attends the act. He suffers agony in the neck of the bladder after coition. In micturition he has noticed that the urine often becomes more bloody towards the finish."

I expected to find a vesical growth with the electric light, but nothing abnormal could be discovered. The entire bladder was healthy. I was just giving up the examination in despair, when I saw a stream of brightish blood shoot right across the prism. Keeping the instrument fixed, I waited until the medium became clear again, and then I found that I was watching the orifice of the right ureter. In another second a jet of bloody urine burst from the tiny opening, and, after forming many rings, paled by diffusion and disappeared, but only to be replaced by a successor. The phenomenon of afflux suggested to my mind a miniature cuttle-fish, squirting out its colored fluid into the water around: the right renal source of the hemorrhage was at once indicated.

CASE. II.—Mr. C., a well-built man, aged 52. Since May, 1887, he had suffered from hematuria, which was painless and intermittent in its character, and seemed more dependent upon exercise than anything else. The urine was passed twice a day. He was disturbed only once at night. Some specimens of hematuria contained cylindrical clots. I passed the electric cystoscope under cocaine, and found a low collarette of prostatic growth, but it was

obviously not the cause of the hemorrhage. The bladder was healthy. I could see jets of blood issuing from the right ureter, and the diagnosis of the site of the trouble was at once established.

CASE III.—For eighteen months the patient had suffered from hematuria. The urine varied much in color, but there were no symptoms whatever to afford a clue as to the exact source of the bleeding. The electric cystoscope (No. 30 French gauge) showed the bladder to be perfectly healthy, but, on turning the instrument towards the left ureteral orifice, a spurt of bloody urine flowed over the prism. I allowed the ureter to play upon the prism, in order to judge of the rhythm of the flow, but it never varied, although Drs. Hewitt, Lys and I watched it for some little. It was rather like an artery severed under water. I could detect no renal tumor in any of these cases.

The author concludes his article by claiming that the many methods and instruments advised and devised for obtaining urine direct from either kidney must now be partially superseded by the electric light. The ureteral orifices are not hard to find. They are very rarely displaced (Author, Case of Tubercular Exfoliating Cystitis. Pathological Trans. vol. xxxvii, page 310) and still more rarely are they absent. (Author, Atresia of the Vesical Orifice of the Left Ureter, Ibid., p. 300.) A little tact in manipulation and knowledge of the cystoscope will bring them into view, and amply repay the operator for examining them.

A New Method of Treating Abscesses—Evacuation; Thorough Solution of the Adhering Pus; Disinfection, Distention and Compression.—WM. C. WILE, M. D., of Danbury, Conn., has for the last year been using the method described below, with the most satisfactory and unvarying results, in all classes of abscesses not multiple, and not situated in any of the great cavities of the body. The following is the authors own description of his method:

As soon as I am satisfied that pus has formed, I plunge into the cavity a large size aspirating needle and attach to it an Allen Surgical Pump, and by turning the crank, remove all that is possible of the contents of the sac. I then take a twenty volume solution of peroxide of hydrogen. To this I add an equal volume of water and by reversing the motion of the handle of the pump, without withdrawing the needle, I inject the cavity till it is mod-

erately distended only. Almost immediately I find that the distention becomes greater and greater until I am satisfied that the medicament has reached every nook and corner. Then I simply turn the pressure off from the rolls of the instrument at the back of the pump: the accumulated gas which has been given off rushes out through the tube, carrying with it a considerable quantity of débris. I tighten the rolls again and, continuing the motion of the instrument in the same direction, I extract every particle that is left, and repeat the procedure as before. At the second washing with the peroxide I notice that I do not get nearly so much distention, and when the screw at the back is loosened the second time but little of the gas and fluid comes away. After this comes off I notice that I have a perfectly clean cavity. Now I take a solution of bichloride, 1 to 2500, and again inject and withdraw two or three times. I am confident that I have a perfectly aseptic cavity. At this stage the needle is removed, and I place over the whole integument overlying the abscess a smooth, even pad of iodoform gauze. I bind it firmly and neatly in place by an abundance of bichloride gauze bandage.

This dressing I invariably leave in place from four to ten days, when I always find complete closure of the cavity, perfect adhesion of its walls, and not a trace of the abscess left. I do not believe there is to-day any other mode of procedure in this particular class of affections that will produce such satisfactory results for the same amount of outlay of skill and time.—*Jour. of the Amer. Med. Association.*

Two Cases of Gunshot Wound of the Abdomen in which the Hydrogen Gas Test was Applied.—J. L. HILLMANTIL, M. D., House Surgeon, Cook County Hospital, Chicago, Ill., reports two cases showing the result of the application of the latest method of diagnosis of perforating wounds of the intestines, as devised by Dr. N. Senn, of Milwaukee.

CASE I.—P. C., male, æt. 50 years, in good general health was shot just to the right and on a level with the umbilicus. A probe could be introduced into the wound several inches. The patient was sent to the hospital where an examination was made five hours after the injury. Abdomen not distended but showed a changing line of dulness, corresponding to changes in position of patient, and indicated the presence of fluid in the peritoneal cavity. There

was little oozing of a bloody fluid from the wound. Patient vomited once; the vomited matter contained no blood.

Hydrogen gas was then insufflated, the entire intestinal canal being distended until the man complained of a tense abdomen and "belched up." The gas could be accurately followed, passing through the ileo-cecal valve with a gurgle next filling up the umbilical region and finally distending the stomach. During this time the wound was very closely watched to notice the escape of gas. None escaped, but some bloody, serous fluid was forced out by the general distention: and as the wound was all this time covered by fluid, gas would have escaped in bubbles. A stomach tube was then introduced, which procedure caused much straining.

It was decided that the pressure exerted and the escape of gas from the mouth were sufficient proof that the intestinal canal was intact and that laparotomy was not indicated. Wound dressed antiseptically and patient put on light diet. Six days after the injury the wound was dressed and found to be closed. An area of induration was present around the same of the size of a quarter of a dollar, which was somewhat tender. On the same evening the patient vomited once, ejecting only the ingesta. The next morning patient felt as usual. The pulse had been between 72 and 96 a minute all this time; temperature between 99° and 100°. At noon patient vomited again and pulse rose to 110. During the afternoon he vomited twice more and pulse gradually rose to 140. Temperature 100°. At 7 P. M., patient bathed in perspiration, pulse very weak.

Dr. Fenger made an examination and found a small tumor in the right hypochondrium, which was painful on pressure. No abdominal distention, percussion gave flatness especially over right side. Dr. Fenger decided to make a laparotomy immediately. The stomach was found dilated. Recent adhesions between coils of intestines, omentum and mesentery. Upon breaking through these, about eight ounces of thin, milky, purulent fluid gushed out, emitting a slightly fecal odor. The case was treated *secundum artem*. Patient expired eight hours after operation. On autopsy the entire gastro-intestinal canal was searched for perforations, but none were found. Several pus cavities were found closed off by adhesions formed between the omentum, pancreas and coils of ileum, and possibly following the track of the bullet or probe.

In the second case a bullet wound, caused by a pistol, was noticed

one inch to the right and on level with umbilicus. One and one-half hour after injury patient was brought to the hospital. Complained of some pain in the abdomen. Vomited shortly afterward, and made several ineffectual efforts at defecation; vomit contained some clots of blood. Dulness over part of the abdomen pointed to the presence of fluid. Catheterization gave six ounces of normal urine. Patient etherized and hydrogen gas-test applied. The gas, with slight pressure, was soon heard to enter the abdominal cavity with gurgling sound, and in a few seconds issued in bubbles from the bullet wound. On application with a lighted candle these burned in spurts. Dr. Fenger made the laparotomy. Almost the entire abdominal cavity was filled with blood. Fourteen perforations were found between the ileo-cecal valve and the stomach; also two severe contusions of the external coat of the intestines. Four holes were found in the mesentery in which were numerous bleeding vessels. The perforations were closed by Czerny-Lembert sutures. At two places the bowel had to be resected on account of four perforations in each place close together. The continuity of the lumen was restored by lateral approximation with decalcified bone plates after the method of Dr. Senn.

After all the apertures found were closed and the vessels tied, the intestines were replaced and gas again insufflated. The sutures proved to be absolutely air-tight. Some bubbles, however, escaped from the upper extremity of the incision, but Dr. Fenger thought it came from the peritoneal cavity. The abdomen was flushed, but the patient, from shock and loss of blood, was expiring. During the operation the entire mass of intestines was necessarily exposed, but was kept covered with towels and hot boracic acid solution allowed to trickle over them. Constant stimulation was necessary to keep the patient alive.

At an interval of an hour two infusions of saline solution were made, 16 ounces being used each time. A marked beneficial effect was noticed on the pulse as well as on the general condition of the patient. Abdominal wound not closed, as the patient had expired. Duration of the operation two hours and three quarters.

REMARKS.—In the first case we have an excellent illustration of the efficiency of the gas-test in cases in which there is no perforation, and we may say with safety that one unnecessary laparotomy was prevented, the exit of the gas through the mouth and the absence of the same in the peritoneal cavity after complete distention

proving that the walls of the gastro-intestinal canal were not broken. This patient was not anesthetized, and the insufflation caused no inconvenience besides the belching. The secondary laparotomy became necessary after the formation of abscesses along the track of the bullet. The formation of these was undoubtedly the result of infection through the external wound and not through extravasation of feces.

In the second case we see the gas escaping in bubbles with the greatest ease from the bullet wound in the parietes, removing all doubt as to the diagnosis. In this instance the gas-test might be said to have been superfluous, as the other symptoms and signs were conclusive, but the time occupied was so short, and the result so striking that the procedure can hardly be criticized. This method of diagnosis will do its good work by its negative results, and will undoubtedly prevent many unnecessary exploratory laparotomies, as it did in this first case, and it should be applied in all doubtful cases before a patient is exposed to the great danger incurred by exposure and close examination of the entire abdominal cavity for the purpose of searching for that which does not exist.

Furthermore, by the application of the test after all perforations found have been sutured, the existence of more apertures may be ascertained by the escape of gas; it also proves the competency of the intestinal sutures, and the permeability of the canal at the points where the bone plates are used.—*Jour. Amer. Ved. Assn.*

DISEASES OF THE CHEST AND THROAT.

BY WM. TOWNSEND PORTER, *Professor of Physiology and Lecturer on Diseases of the Throat in the St. Louis Medical College.*

Treatment of Pneumonitis.—In a paper published in the *Brit. Med. Jour.*, for June 30, 1888, Dr. Arthur Jamison gives the methods and results of treatment in 213 cases of croupous pneumonitis occurring in his private practice.

During the first years of his practice his treatment was mainly expectant. He had been taught that pneumonia had a definite course; that drugs could not alter its natural history, and that, beyond stimulating the old, rest in bed, a warm poultice, and any sort of a placebo mixture was treatment enough. Symptoms, on

the average, subsided on the 11th day; convalescence seemed established and expectancy triumphant. Any prolonged debility afterwards was put down to insufficient means, imperfect hygienic surroundings, etc. This apparent recovery, however, was by no means permanent. The pneumonic attack was frequently followed by slight cough and expectoration, inability to work as well as formerly, a constant sense of slight weariness, and in nearly every case a feeling of flatulent distention and of weight after meals, and a varying amount of anorexia. Though the body might be fairly well nourished, yet the face was too thin proportionately to the body and wore an expression of considerable depression, the bowels usually torpid; the tongue furred, and especially indented with teeth marks. On close inquiry it appeared that for three or four months following the attack of pneumonitis, these patients got on fairly well, but after they began to droop and never felt up to the mark, and with this chain of symptoms evidences of unresolved pneumonia were always found.

Of these 74 cases of unresolved consolidation, 29 were treated by expectancy, 20 by ammonia, 10 by quinine in full doses, 7 by aconite, and 8 by antimony in largish doses of its tartrate.

Dr. Jamison's experience of aconite in doses to produce any effect is against its use at all in pneumonitis, as he feels sure it increases the danger of, and often actually causes cardiac collapses. The ammonia treatment seemed much the same as the expectant, except there was thought to be more pain in the side during its use. Quinine appeared less risky than aconite, but just as inefficient to control the disease even in doses large enough to lower the temperature for a time. In the discussion on this subject in the New York Academy of Medicine in 1887 there was a general consensus of opinion upon the inutility of quinine as an antipyretic in this disease. It was considered useless in small doses and dangerous in large ones, producing cardiac and nervous depression.

Dr. Jamison has a strong impression that any treatment directed only to lower the temperature is bad. In this he is in accord with the most recent advances. There have not since the time of Hippocrates been wanting those who have claimed fever as a curative process. The continental idea that the high temperature is the chief danger in fever has had its day. The reaction against this idea and the treatment based upon it, in the midst of which we now are, was shadowed forth by Cohnheim, who said that fever

might be regarded as an agent by which the body burned up a virus not to be otherwise disposed of. In the Croonian Lectures on antipyretics delivered before the Royal College of Physicians of London in June of this year, Dr. MacAlister mentions Cohnheim's prediction that physicians will one day regard fever, not, indeed, as a condition free from danger, but as, on the whole, a wise provision of nature.

Recent experiments have shown that animals may be kept at high febrile temperature "for at least three weeks" (Welch) without being seriously affected. In the Cartwright lectures for 1888 (*Med. News*, May 19, page 540) Prof. Welch, after a critical examination of the experimental and clinical evidence on this question of the injurious effect of high temperatures, concludes that "although the experiments narrated showed that prolonged high temperature is an element in the causation of fatty degeneration of the heart, they also indicated that other factors such as infection, are concerned in the production of this lesion. Moreover, experimental evidence was found in support of clinical facts showing that this alteration may exist without serious interference with the functions of the heart, so that the conclusion seems justified that failure of the heart's power in fever is less an effect of high temperature than of other concomitant conditions. Even in fevers, such as typhoid fever and pneumonia, where the height of the temperature is undoubtedly a most important index of the severity of the disease, there exists no such parallelism between the temperature and the nature and the severity of the other symptoms as we should expect if these symptoms were caused by the increased heat of the body.

The important bearing of the present wide-spread discussion of the etiology and pathology of fever on the treatment of pneumonitis and allied states is self-evident. If prolonged high temperature is not injurious *per se*, then the occupation of antipyretics, as such, is gone. We find to-day two schools, one holding that all pyrexia is dangerous and to be reduced at all hazards, the other, with its centre at Vienna, arguing that fever is beneficial and not to be rashly interfered with.

The truth probably lies between these two extremes. Whether or not we use antipyretics to reduce temperature, we should not forget that these remedies, for example the cold bath, are useful in other ways. All are familiar with the powerful sedative action of cold upon the nervous system and the circulation.

If the above is a fair, though brief statement of the best medical opinion of the day, *i. e.*, that fever itself is by no means as dangerous as it was once thought to be, than we can readily join with Dr. Jamison in his condemnation of kairin, which reduced the temperature repeatedly in a case reported in the *Brit. Med. Jour.*, for Jan. 28, but only at the cost of great depression, reaching marked cyanosis and collapse where two doses of about 10 grains each were given in close succession. The patient died of phthisis ten months afterward. "He treats pneumonia best, who, having the lowest percentage of deaths, has the fewest cases of consolidation afterwards. Persistent consolidation involves great risk of tuberculosis, for Bruner, Siegel and others have shown that tubercle grows apace in old inflammatory products. Judging by this criterion of recovery without consolidation, the cases in Dr. Jamison's series which were treated with antimony gave better results than any of the others. Small doses are to be preferred to large. For young adults one-twentieth of a grain of tartar emetic every hour is quite enough. For older people it is well to give less. When pain, cough, and chest oppression are relieved, the remedy may be given less often. He continued the use of the drug for several days, often a week, after the temperature had fallen to normal, to ensure removal of the inflammatory products remaining behind. There were no ill effects from the drug used in this dosage, no sickness, no diarrhea; its action seemed simply that of a respiratory sedative. Generally a little tincture of camphor was given with it to ease pain. Of the 81 cases in which no traces of mischief were to be detected afterward, no fewer than 65 were treated in this manner.

At first cardiac failure was feared, but this apprehension proved groundless, the small doses used, by easing the strain of respiration, seeming to lessen the danger of heart failure.

Dr. Jamison's experience leads him to conclude that in small, frequently repeated doses of antimony we have our best known remedy at present. The dyspepsia and general want of tone of the system as well as the subsequent consolidation itself in imperfect recoveries, are best treated by mineral acids, preferably by nitric acid coupled with the most careful attention to every hygienic detail.

The Diagnosis of Early Phthisis by the Microscope.—The importance of microscopic examination of the sputa in pulmonary af-

fections is even yet imperfectly recognized by the body of the profession. A positive diagnosis may be sometimes made from such examinations weeks before the physical signs give any certain indication of the character of the disease.

Dr. Francis Troup, of Edinburgh, in a paper which appeared in the *Edinburgh Medical Journal*, for July, 1888, mentions a case where he detected tubercle bacilli and fragments of elastic tissue in a patient supposed to be suffering only from a trifling cold of about four weeks duration, and who had till then been absolutely free from demonstrable lung disease.

Following is an abstract of Dr. Troup's paper: Dr. Troup finds the bacilli in sputum often aggregated into heaps, or lying together in twos and threes with their long axes parallel, or forming rectilinear figures of four to eight, as if they had been enclosed in a cell whose walls had disappeared and permitted their dropping out while retaining their intra-cellular arrangement. Frequently they are seen to be very much beaded; they then seem to be made up of three to ten minute cocci cemented together into a rod. This variety is found in greatest abundance in very acute cases of phthisis with high fever and rapid disintegration of lung, and is often accompanied by another coccal or diplo-coccal organism, occasionally in enormous quantities. The spit in which he has found this companion organism is generally tough, tenacious, transparent, frothy, and contains so much albumen that a very gentle heat coagulates it into a solid mass. In slower phthisis when intercurrent inflammatory attacks happen, this coccal organism also appears often, and the bacilli of tubercle change into the beaded forms. In other cases of old phthisis where the process is sleeping for the time, one meets in the sputum heaps of granules which resisting decoloration by acids, Dr. Troup takes to be ruins of bacilli. The entire bacilli perhaps stain only at their poles or in the centre, and their empty sheath is visible or wrinkled into folds very much like an ill-gartered stocking.

Dr. Troup examines the fresh sputum without any preparatory treatment. The staining properties of the bacillus remain unimpaired for very long. In sputum four years old he finds they stain as readily as they did when it was recent. For merely diagnostic purposes the most trustworthy stains are two—the aniline-fuchsine of the Koch-Ehrlich, and the carbolic-fuchsine of the Neelsen solution. The latter is preferable, for it does not soon

decompose and can therefore be prepared in quantity, and stains as intensely after months as it did at first. As to the microscopical requisites he would say that if the bacilli are numerous, and one possesses a certain amount of skill in recognizing them, they may be easily found with a dry object glass of 250 diameters, or even less, but by far the most satisfactory mode is to use some form of condenser, as Abbe's, for illumination, and an immersion object-glass, water, or still better, oil. The latter can now be obtained very cheaply, Leitz making a one-twelfth inch, quite equal in its performance to the Zeiss one-twelfth, at nearly one fourth the price of the latter.

If the bacilli are detected, their diagnostic significance is the highest possible; and they are to be found in every case of tubercular phthisis, and in it alone of lung diseases,—now numerous, now scarcer, but appearing with a persistence that will not escape the notice of perseverance and a modicum of practical knowledge in the search. Therefore a negative result in the hands of one accustomed to the examination (and every one can easily acquire the necessary skill) is also of great value diagnostically. Naturally it is only where the breaking up of the original reaction products has begun and opened a way outwards for the bacillus that it will be found. In acute miliary tuberculosis it will not be seen at the beginning, and it is here and in all suspicious cases that a thorough quest for elastic tissue should be instituted; the two methods go hand in hand.

As to prognosis it may be asked, Has the number or size, etc., of the bacilli in sputum any demonstrable connection with the probable course of the phthisis? With the sole exception of the constant appearance of the swarms of the beaded bacilli, already alluded to, he would say most decidedly no. Prognostically we are in no better position with the bacilli than without them. The one thing certain, however, is that the lung disease is tubercular where they are present. The prognosis even of a tubercular process depends on many other factors than the presence of bacilli—the amount of fever, for instance, the sweats and diarrheas and cachexia, and the intensity of the destructive process in the lung, as measured by the amount of elastic fibres shredded off.

Prior to the discovery of the tubercle bacillus great reliance was placed on the presence of elastic fibres in the sputum as an evidence of phthisis; they were considered pathognomonic of the

disease, and even now he does not consider this view to be a very highly exaggerated one. In no case of phthisis will they be missed if sought for with sufficient patience. They are to be found very early in the disease and in the most innocent looking sputum. They will be discovered before stethoscopic or percussion sounds, even when listened to with skilled ears and interpreted by skilled brains, give any other than uncertain information as to what is going on. That they precede the bacillus, mayhap for a considerable time, as daily examination of the expectoration of more than one early case has taught me, I can affirm with confidence. Therefore, their diagnostic value is of a very high order, and should not be disparaged in favor of the tubercle bacillus, to which I do not think a first place should be conceded.

The bacillus may be absent temporarily, not so the elastic tissue, which may be detected abundantly where bacilli are extremely few in number. For its discovery no elaborate microscopical appliances are necessary—a power of 150, or even 80 diameters is amply sufficient, and when elastic fibre is seen the evidence of lung disintegration is unassailable.

It has been said that unless the tissue has an alveolar arrangement much stress need not be laid on its appearance in expectoration. This is a great mistake. He has now photographs in his possession from cases of undoubted pulmonary phthisis, where this alveolar arrangement is very well seen, and others where the fibres are straight and in thick fasciculi, totally destitute of alveolation. No preparatory treatment of the sputum is needed for their demonstration. One, after a little experience, is able to select the dirty-white or reddish-yellow particles in which the fibres are likely to be found. A little morsel is pressed between the slide and the cover-glass and the examination proceeded with. Or a drop of a 30 per cent solution may first be added. As the fibres are not very compressible, they glide to the edge of the cover-glass, and will probably be seen there in the greatest abundance. Different from the bacillus, it is not easy, to one accustomed to microscopic work, to mistake these fibres or confound other things with them.

One cannot say of tissue, however, that it is present only in the sputum of phthisis—other destructive changes in the lungs cause its appearance, but if seen the supposition is strong that this is the disease with which we have to do, and the supplementary search for the tubercle bacillus will complete the diagnosis. It is also as

strongly resistant to putrefaction as the bacillus, for he had easily found both in a specimen sent from the antipodes.

Treatment of Bronchial Asthma.—Dr. C. T. WILLIAMS gives some fruits of his experience at the Brompton Hospital for Consumption and Diseases of the Chest in an interesting paper in the *Amer. Jour. of Ved. Sci.* for August. The following is an abstract:

Dr. Williams believes that bronchial asthma is a Leurosis chiefly affecting the pulmonary plexus, and spreading through its various connecting branches, and thus implicating the pneumogastric, spinal and sympathetic nerves. In the search for the best means of allaying the asthmatic nerve storms many difficulties are encountered, as in the case of all neuroses. These arise in the most part from individual idiosyncrasies. There are, however, practical rules for treatment :

First. To counteract, if possible, the tendency to asthmatic attacks, which arises generally from some definite lesion, the result of a former inflammatory attack.

Second. To allay and keep allayed the asthmatic spasm; this is principally done by removal of the patient from the various exciting causes of the attack, but also by reducing the sensibility of the pulmonary plexus of nerves.

Hyde Salter noted that no less than eighty per cent of asthma is traceable to bronchial inflammation in childhood, following on whooping cough, measles, bronchitis or broncho-pneumonia, and in adults it often follows upon phthisis.

The most probable cause of this sequence is that all these diseases give rise to swelling of the bronchial glands. As shown by De Mussy and his pupil Barety, it is impossible for enlargement of the subtracheal glands to take place to any large extent without causing pressure on the vagi and their branches. Considerable enlargement of the bronchial glands at the root of the lung is by no means infrequent, and may be detected by physical signs which consist generally in dulness in one or both interscapular and suprascapular regions. The swelling of the large glands of the anterior mediastinum may be detected by the presence of dulness over the first portion of the sternum.

Now, we know that the preparations of iodine are singularly efficacious, both in reducing the frequency of asthmatic fits, and also

in causing the absorption of lymphatic glands, if administered in sufficiently full doses, and it is probable that this last effect is the explanation of the first one. Some patients never derive benefit from it unless they feel the commencement of iodism.

Iodism may generally be postponed by largely diluting the salt with water. This drug appears to be far more effective in doses of from gr. viij to gr. xv than the smaller ones of gr. ij to gr. v, and at the same time the larger dose does not appear to increase the risk of iodism, provided, always, that plenty of water be taken with it. Patients often take gr. viij to gr. x two or three times a day for a month, and one patient of Dr. Williams persevered for two years, with the only drawback of an occasional rash of urticaria and a metallic taste in the mouth. By this means he was kept entirely free from asthma.

The iodide of sodium may be substituted for the iodide of potassium, but the dose is smaller (about five grains), and a combination of the two iodides is often desirable.

Various mineral waters containing iodine in some form exercise a favorable effect on asthma, but are slower in their action. Such are the Woodhall and the Purton in England, and the waters of Kreuznach in Germany.

The indications for prescribing iodide of potassium are (1) the absence of catarrh and and bronchitis, (2) the well marked presence of the neurotic element, and (3) the detection of dulness along the right or left edge of the first portion of the sternum, or in one or both interscapular regions, showing enlargements of the bronchial glands. Another medicine of great use in reducing the predispositions to asthma is arsenic, and it may with advantage be combined with the iodides. Free sponging every morning in a bath with tepid or cold water, to which sea salt may with advantage be added, may do much to keep off the attacks of asthma.

The treatment of the attack generally resolves itself into the administration of antispasmodics, which may be classified as stimulant and sedative. Brandy and water, whiskey and water, best administered warm, hot strong coffee, spir. etheris (in dram doses), and inhalation of nitrite of amyl are examples of this first class, and appear to act by promoting large bronchial secretion and expectoration, but the nitrite of amyl, which is said to influence the vasomotor system and to relax the arteries, has not been successful in Dr. Williams' hands in asthma.

There is both clinical and experimental evidence of the efficacy of sedative antispasmodics, such as belladonna, stramonium and henbane. The difficulty lies in applying them at all times to the lungs, and bringing the pulmonary plexus and bronchial muscle fully under their influence. Dr. Williams prefers administration by the stomach, or subcutaneously, to the method of inhalation, as it seems probable that the products of combustion of a plant must differ greatly from its carefully extracted juices.

A useful form is the following:

Potassii iodidi,	- - - -	ʒij to ʒiij
Tinct. stramonii,	- - - -	ʒij to ʒiij
Syrupi scillæ,	- - - -	ʒj
Extracti glycyrrhizæ,	- - - -	ʒj
Aquæ, ad.,	- - - -	ʒviij

Dose: A tablespoonful in a wineglassful of water three times a day.

A pill of extract of stramonium (gr. $\frac{1}{2}$), or belladonna (gr. $\frac{1}{8}$) should be given at night during the attack. Of the various sedatives to be used during the attack chloral is one of the safest and best, but a dose of from gr. xx to xxx should be administered at the beginning of the attack, or, if there be premonitory symptoms, before it has actually commenced. A dose at bedtime will often enable an asthmatic to sleep through slight early morning seizures, and this medicine will, if pushed strongly, control the asthma. When the paroxysm is very severe, chloroform, or ether, or iodide of ethyl may be inhaled, and capsules of chloroform (℥x) and iodide of ethyl (℥iij to ℥v) are specially well adapted to the purpose, as being tolerably safe to entrust to nurses and patients. Iodide of ethyl can be inhaled up to ℥x, and the inhalation even repeated at the end of two hours without danger, and while it quiets the asthmatic spasm, it also calms the cough which accompanies it. In the height of the paroxysm the patient can neither swallow nor inhale, and it is then that the hypodermatic injection of morphia (gr. $\frac{1}{4}$), or of atropia (gr. $\frac{1}{60}$), or of both combined, does great good. Suppositories of morphia or belladonna have often succeeded in relieving the tightness of breathing when other measures were impracticable. The application of stimulating liniments, such as lin. terebinth. aceticum, or lin. ammoniæ, to the wall of the chest during an attack often gives relief to the breathing, and is well worth a prolonged trial. The ethereal tincture of

lobelia should certainly be tried, but in full doses, say a dram, and repeated every four hours while the spasm lasts. The various bromides, of potassium, ammonium and sodium are useful in large doses, but their influence on the pulmonary plexus is not so satisfactory as that of the iodides, though they may often be combined with these advantageously, and the addition of a dram of the bromide of potassium to the chloral¹-night-draught generally augments its sedative effect.

[It will be observed that the remedies used by this author are mostly given in large doses. A frequent error in the treatment of asthma is that the doses are too small. This is especially apt to be the case with nitre paper. "Experience has taught me the necessity of pretty well smothering a bad asthmatic with the nitrous fumes." Thorowgood, *Bronchial Asthma*, 1887, p. 59.]

The application of compressed air is gaining ground, especially on the continent, but requires a special apparatus, complicated and expensive. The great relief comes from the diminution of the emphysema, as evidenced (1) by the reduction of the chest circumference, (2) by the reappearance of hepatic and cardiac dulness, (3) by the greater freedom of respiration. Besides this, cough and spasm subside, and there is cessation of the wheezing and sonorous rhonchi within the chest, the breathing is easy, but slow, and the pulse is stronger and tenser than before. Not only do the attacks become less frequent, but the respiratory capacity, as measured by the spirometer, increases, and the general condition is shown by the gain in the appetite, color and weight, to be improved. But to secure any good, permanent result, a large number of baths must be taken (twenty-four spread over one or two months is the minimum, and fifty or sixty are often desirable). Organic diseases of the heart or arteries contra-indicate this treatment.

The dietary which suits most asthmatics best is that which limits them to two meat meals, viz., breakfast and lunch, or early dinner, and restricts their food for the rest of the day to liquids, with only bread, toast or biscuits as solids, the great principle being that the asthmatic should retire to bed with gastric digestion quite complete, and thus preclude any pressure upward against the diaphragm from flatulent accumulation in the stomach. If there is flatulent dyspepsia, sugar, starch, *e. g.*, potatoes, should be avoided, and a little alcohol with meals will be useful. Coffee is generally a suitable beverage, and should be taken once a day, black, as it distinctly les-

sens the spasm without rendering the patient sleepless, whereas tea often increases the neurosis. Meat extracts taken warm, and beef-tea are excellent, as they are easily assimilated, and enable the patient to get over the asthmatic attack without any great prostration. All articles of food which are in themselves more or less indigestible should be strictly avoided.

The atmosphere which suits most asthmatics best is a dry one, hot or cold, as the case may be, and a locality rather devoid of trees, or at any rate of deciduous woods. Soil has a great influence, and a dry, permeable soil is better than a damp, impermeable one. As a rule, clay is pernicious; some asthmatics, however, cannot live on either limestone or chalk, though sandstone and granite are rarely complained of. Asthmatic people generally thrive better in towns, especially in smoky towns, than in the country.

A Leech in the Larynx.—A recent number of the *Revue de Médecine et de Pharmacie Militaire* contains an extraordinary case, in which a leech, which had somehow found its way into a man's larynx without his knowledge, gave rise to unusual symptoms, for which the medical attendants were puzzled to assign a cause. The patient, a soldier, had suffered from hoarseness and a sensation as of a foreign body in the larynx for three weeks, but there was no serious dyspnea, and nothing could be seen with the laryngoscope. During the last eight days of that time he spat blood, and at length he distinctly felt something move deep down in his throat. On the twenty-third day, after the patient had made a violent expiratory effort, Dr. Godet caught sight of the leech fixed in the subglottic part of the larynx. No proper laryngeal forceps being at hand, the thyroid cartilage was divided in the median line in front. On separating the two halves, the leech was easily removed. Two sutures were inserted and perfect union was obtained. The voice was absolutely unaffected by the operation, a point worth noting in view of the great stress that has recently been laid on the serious impairment of the vocal function which thyrotomy is supposed to entail. One would like to know how the unwelcome guest managed to get into the man's throat without his being aware of the fact. It is possible that he swallowed it in drinking water out of a ditch or pond.—*Brit. Med. Jour.*

Tannin in Phthisis.—A correspondence of the *Brit. Med. Jour.*, writing from Italy describes Dr. C. De-Viti Demarco's experi-

ments with tannin in the treatment of pulmonary tuberculosis (*Riforma Medica*, June 11th.) The drug was given in the following form: \mathcal{R} Acid tannic, grams. 4; creasote, \mathfrak{m} ii; glycerine and alcohol, aa q. s. To make eight pills, one to be taken every two hours during the day. Two cases were observed. In both the temperature became normal after twelve days treatment, and remained so; the condition of the lungs, however, was unchanged. One of the patients, who was hopelessly ill when the treatment was begun, died in a month, but the other, though having a large cavity in each apex and extensive tubercular deposits in the left lung, was "immensely improved" after three months, having gained weight and almost lost his cough, while the expectoration was diminished to about half what it had been. The prolonged administration of tannin had caused no ill effect. The favorable results obtained by Professor A. Ceccherelli with tannin in local tuberculosis (*Brit. Med. Jour.*, April 7, 1888) seem to encourage the belief that it really has an antagonistic action of some kind on the micro-organism causing the disease.

The Congress on Tuberculosis.—Le Congrès de la Tuberculose held its first meeting July 25th. M. Chaveau was elected president, and in his opening address said that Morgagni had already in his time [Morgagni died in 1771] asserted the contagious character of tuberculosis. Experiments made at the veterinary school of Lyons had established the fact that tuberculosis of the lower animals and that of man were identical. M. Cornil in his address stated that the bacillus of tuberculosis could penetrate the mucous membranes independently of any lesion, scratch, or the slightest solution of continuity. The experiments of MM. Chauveau and Villemin proved this. Animals in perfect health fed on tuberculous material or made to inhale vapor proceeding from tuberculous matter, were attacked by tuberculosis. Professor Cornil, in concert with M. Debrechnowetrie, had studied this question. These investigators caused guinea-pigs to swallow one or two drops of Koch's bacillus cultivation fluid. There was absence of diarrhea. Although the epithelium remained intact, nevertheless the follicles were swollen, and the mesenteric and lymphatic glands presented unmistakable tuberculous granulation. After the fourth day of the injection of the cultivation fluid, there was a considerable increase of cells in the lymphatic glands; on the

sixth day actual tubercles were present. M. Cornil had met cases which pointed to the possibility of tuberculous infection by coitus. In order to test the possibility of this mode of contagion, he introduced some bacilli into the uterine cavity of guinea-pigs. The first result was catarrh of the cervix uteri; afterwards a considerable increase of lymphatic cells containing bacilli. On the fourth day small tubercles were observed situated beneath the stratified epithelial cells; the tubercles then invaded the connective tissue between the uterus and the bladder. M. Cornil concludes that sexual connection may furnish a means of contagion. M. Nocard in his address dwelt on the danger caused by the flesh and milk of tuberculous animals used as articles of food, and the necessity of boiling milk before drinking. When this was impossible, goat's milk should be used, as these animals are exempt from tuberculosis. With regard to the flesh of tuberculous animals, M. Bouley, a distinguished authority on such questions had urged that if an animal presented tuberculosis in any organ, the animal should be seized and considered unfit for food. The Brussels Hygienic Congress had supported this measure, yet it had never been rigorously applied. M. Nocard had made a series of researches which had led him to believe that meat from tuberculous animals was rarely injurious, and only to a slight degree.—*Brit. Med. Jour.*

It is too often thought that raising milk to the boiling point is sufficient to sterilize it. Schroeder and Von Dusch, and later Pasteur, have shown that a continuous exposure for half an hour to a temperature of 130° C. (266° F.) is required for the complete sterilization of milk. Soxlet's apparatus for this purpose is said to be the best. If this cannot be had, the milk may be very largely sterilized by boiling it in tightly stoppered, strong glass bottles. Even if sterilization be not complete, boiled milk possesses great advantages over uncooked milk in that the casein is made more soluble and digestible and the milk curd is in smaller lumps. As the division of the food has much to do with the quickness of its solution by the digestive juices it is not surprising that Reichman (*Archiv für Klin. Med.*, Bd. 14, No. 6) found in a series of experiments on nine adults that boiled milk was digested in two and a half hours, while uncooked milk was found in the stomach four hours after ingestion. The lumps of casein were observed to be much finer in the former milk.

The use of the goat as a wet nurse was recommended in 1819 by Dr. Tweierlein, a German physician. The reader is referred to the *Medical News*, July 7th, 1888, p. 8, for an able presentation of the milk question from a clinical standpoint by Dr. Baruch.

DIETETICS OF INFANCY.—Dr. Arthur V. Meigs, in a paper before the New York Academy of Medicine referred to the artificial food which he recommended some time ago, and to which reference was made in an editorial (*Vid. August COURIER* p. 126). He says that in further study of the subject he has come upon the following easier and therefore better method for the preparation of the food.

“One quart of milk is placed in a vessels, a tall narrow pitcher is best, and after standing for three hours, the upper pint is slowly poured off. This contains the greater part of the fat (cream), and when the child is to be fed there should be mixed together three ounces of this cream, two ounces of lime water, and three ounces of sugar water which must be made in the proportion of eighteen drams of milk sugar to a pint of water.” It is better to have the food freshly prepared each time, and if the child is very young the proportions of the several ingredients should be maintained, but a dessert spoon or tablespoon should be the measure in stead of the ounce.—*Med. News*, July 7.

• TIME AND LABOR SAVING DEVICES.—Those who are forced to do much work in a short time should learn to avail themselves of all possible auxiliaries to lighten labor and save time. The day has gone by when the busy statesman, or novelist, or lawyer, or physician, can afford to spend tedious hours in doing the mechanical work of writing speeches, novels, opinions or professional experience. Stenographers and type-writers have become invaluable and indispensable auxiliaries to men of many labors. A word of caution is here necessary, however; there is a possible danger that with these auxiliaries which make the achievements within reach much greater, the ambitious, hard-worked individual will set to himself for greater tasks than he would under other circumstances.

C. K. MILLS in *Proceed. San. Con. Phila.* 1886, p. 86.

FOREIGN CORRESPONDENCE.

BERLIN LETTER.

BERLIN, August 25, 1888.

EDITOR COURIER:—Having spent some time in Berlin and attended a number of clinics, I may be placed in a position to describe some of the advantages Berlin offers to American physicians, who come to Europe to improve themselves in one or more branches of medicine, or who desire to become specialists. The opportunities for this sort of work become yearly more and more improved in our own country, and no one will deny that our own country can justly claim some of the brightest minds in the profession; it is but natural, however, that in a city like Berlin, where patients from all parts of the globe flock to obtain relief, an enormous amount of material is constantly at hand, and that the chances to learn in a corresponding manner grow better. It might interest those of your readers who contemplate a trip to this country to know how to employ the time most advantageously, and how to get the most information in the shortest time.

I will, therefore, in this letter describe some of the well known surgeons and gynecologists, their methods of teaching, clinics, etc. Among German gynecologists, Dr. A. Martin is the most successful. Dr. Martin is a bold and marvellously brilliant operator, who operates with great nicety and such confidence as to leave the impression that it would be impossible to meet with any serious complications and dangers even during the greatest operations, and that in case they should arise, he is prepared to meet them.

One of the most frequent operations done at his new and elegant private hospital on the Elsasser Str., is abrasio mucosæ, curetting of the uterus. The patient being placed on her back, and the thighs well flexed upon the pelvis, a Simon's speculum is introduced

into the vagina and the portio vaginalis by means of a bullet-forceps brought into view. After the parts are thoroughly disinfected with an irrigator, the curette is introduced and the mucous lining of the uterus removed. Then the uterine cavity is cleansed with an irrigator, and by means of an uterine syringe (Braun's) liq. ferri is injected to check all oozing from the uterine cavity, and to destroy diseased portions of mucous membrane not yet removed.

This operation is done in all cases of retained placenta, in all cases of diseased condition of the mucous membrane of the uterus and as a diagnostic measure. The removed portions of mucous membrane are carefully examined under the microscope, and at different times Dr. M. has been enabled to diagnosticate incipient uterine cancer, and through an early and timely operation prolong the life of his patients. Another operation, which is frequently done by Martin, is excision of the diseased portions of the os uteri in chronic forms of catarrh, erosions, ulcerations, etc., in cases where the ordinary means of treatment failed, and the patient's general health is impaired. As I have already stated, Dr. Martin is a very successful operator, the mortality of abdominal sections in his hospital being about 2 per cent., hysterectomies (abdominal) about 35 per cent. It is well to state here that German gynecologists do less abdominal sections for exploration, than Dr. Lawson Tait, and have less unfinished operations than that distinguished operator, and it is for this reason, probably, that their percentage of deaths after abdominal sections is greater.

Dr. M. uses almost exclusively catgut for sutures and ligatures, and to give your readers an idea of the enormous amount of work he does, I will only relate that he uses annually 2,500 Mrks. [\$800] worth of catgut. Then again, for each abdominal section he uses new and well disinfected sponges.

During the summer months Dr. M. gives two courses, one in gynecological diagnosis, and a course in operations on the cadaver, both of them for physicians only. Dr. Olshausen, Prof. at the K. Frauenclinic on the Zigle Str., is a very kind and courteous gentleman, a fine operator, and a celebrated gynecologist. Any physician might with great advantage spend a summer with Prof. O., but the circumstance that so many physicians and students attend his clinics and courses, and that for that reason but little attention can be given to the individual student, makes Dr. Martin's clinic more desirable. It is this very reason why Berlin is preferable to

Vienna as a place to study with advantage, and besides I am inclined to think that better work is done in the northwestern part of Germany, than in the southern. Bergmann, Bardeleben, Hahn are the best known surgeons in Berlin. Bergmann is the successor to Langenbeck at the Kais.Clinic on the Ziegel Strasse. He is a bold, daring, brilliant operator—the ideal surgeon. Any afternoon one may see him at the clinic, between 2 and 4 o'clock, handle the scalpel with such skill and dexterity as to challenge the admiration of everyone of the several hundreds of physicians and students who have gone there to see him. One patient after the other is operated upon with care, precision and dispatch. The patients are then turned over to his army of assistants, who arrest the hemorrhage, apply the ligatures, sutures and proper dressings. Dr. Hahn may be seen at the Friedrichshain Krankenhaus, every Monday, Wednesday and Saturday morning, between 10:15 and 12 or 1 o'clock, where he does any amount of operations, and as always ready to explain the object of the different operations, and the different steps of the same.

Prof. Bardeleben at the Charité is a very pleasant old gentleman and a great surgeon. During the summer months a course in operations on the cadaver is given at the Charité, under the direction of Prof. Bardeleben, Statsarzt, Dr. A. Koehler and a number of assistants. Here physicians and students have a splendid chance to become proficient in surgery, as the amount of material is unlimited, and everyone has a chance to do any individual operation a number of times.

H. H. V.

A PARALDEHYDE MIXTURE is prepared by Smith by shaking 20 parts of paraladehyde vigorously in a bottle with 30 part of syrup and 60 parts of mucilage of acacia; 90 parts of water are then added and the mixture is again shaken when a permanent emulsion is formed. With a larger proportion the mixture is liable to separate.—*Western Druggist*, Aug. 1888.

THE BUFFALO MEDICAL AND SURGICAL JOURNAL commenced a new volume with the August number in a new and much improved dress.

SOCIETY PROCEEDINGS.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting May 15, 1888, Dr. Tupper in the Chair.

Dr. Frank Glasgow read a paper [Vid. AUG. COURIER p. 97] on

FIBROID TUMORS OF THE UTERUS.

Dr. Tupper asked if it was not unusual for fibroids to come away in large pieces as in this case.

Dr. Glasgow said that as a rule such patients die. This patient would certainly have died if it had not been for the thorough cleansing frequently repeated.

Dr. Tupper said that he saw the patient once or twice, evidently before the sloughing had commenced. There was considerable fever, but what impressed him more than anything else was her appearance. Her face was white; she looked as if she was without any resistance at all: she had a rapid pulse and a febrile condition, and knowing the character of the growth from *Dr. Glasgow*, he had expected a fatal termination. The treatment extended over a long period and required a great deal of care, the cavity being washed out for weeks. It recalled to mind a case which *Dr. Moses* had at the hospital, which for some time suffered from septicemia. A piece as large as a very large orange was expelled at one time: there was an ugly discharge, and the uterus was washed out frequently. The patient also showed the same intolerance of ergot which *Dr. Glasgow's* case showed. *Dr. Tupper* had occasion to inject it once or twice, and she suffered intensely with cramps and nausea so that they had to desist from using it for quite a while. The termination of the case was successful, however; the mass was

expelled and the temperature went down. Recently she was in good health.

Dr. Gehrung said that this case could not have been treated in any other way than as *Dr. Glasgow* treated it. It could not have been removed by laparotomy, and, as it could not be gotten away in one piece, it was taken away piece-meal. By such washings we can keep down septic conditions pretty well. He was very much pleased with the doctor's description of the sponge tents which he used. The instrument which the doctor showed was pretty much the same instrument which he himself had described. His own instrument is of a much smaller calibre than this, and, therefore, no quite so easily kept clean, but if made as large as this it would be quite as easy to keep clean. So that really this was a modification of the instrument which he had used and which had been in existence for some time.

Dr. Grindon remembered when a student, hearing the late *Dr. William Barret* state that there was at that time on record only one case of fibroid of the uterus undergoing carcinomatous degeneration, and that the specimen was preserved in one of the European museums.

Dr. Tupper asked what *Dr. Glasgow* thought of the use of Merck's solution one to twenty four thousand: what is the effect?

Dr. Glasgow said it will kill bacteria, but it won't kill the patient.

Dr. Tupper asked if *Dr. Gehrung* thinks one in 24000 is strong enough.

Dr. Gehrung thought it rather too weak.

Dr. Glasgow said he had used it as strong as 1 in 12000, but never stronger than that.

Dr. Gehrung twenty-four thousand or twenty-four hundred?

Dr. Glasgow, twenty-four thousand. It will kill bacteria.

Dr. Gehrung said he would not not think much of it as weak as that.

FACIAL PARALYSIS.

Dr. Barclay stated that the case of facial paralysis reported at the last meeting, and which was so kindly discussed by the gentlemen who agreed that it was doubtless a case of inflammation of the nerve from the lowering of the temperature of the middle ear

due to syringing had recovered spontaneously, almost without treatment.

BICHLORIDE OF MERCURY.

Dr. Homan related a case in which he had to treat a mashed finger. He used some sublimated lint, the regular preparation, and also used iodoform. It did not seem to do well for several days, and he noticed in removing the dressing that there was a greenish stain, and upon reflection concluded that it must be due to the formation of the green iodide of mercury, that the iodoform must have formed a combination with the mercury, and it seemed to irritate the wound.

Dr. Tupper said that they use very largely at the hospital a similar combination, and he had never noticed anything of the kind. The mercury solution is not strong, but they use the gauze with plenty of iodoform rubbed in, in all kinds of wounds.

Dr. Homan said that in this case there was a good deal of laceration, and the wound had not been thoroughly cleansed in the first instance, and there was considerable discharge and superficial redness and inflammation.

Dr. Grindon recalled two occasions where a suppurating wound was dressed with the old flaxseed meal poultices, that on removing the poultices after they had remained on all night there would be a decidedly green appearance. He saw this two or three times and supposed it was some micro-organism which had developed in the pus.

M. V. M. A.

The meeting of the Mississippi Valley Medical Association which has just closed was a pleasant and profitable one. The attendance was good, though not quite as large as had been anticipated. The Pickwick Theatre, in which the meeting was held, is a convenient hall, well adapted for such uses, and the acoustic properties are very good. The anterooms afforded ample facilities for registration, committee meetings, etc., while the lower hall gave good opportunity for the display of instruments, surgical appliances of various sorts and pharmaceutical preparations.

The first session was called to order soon after the hour announced and was opened with prayer by Rev. J. G. Merrill. Mayor Francis then gave a brief but pleasant address of welcome on the part of the city of St. Louis, and Dr. L. Ch. Boisliniere performed the same office in the name of the local profession, and Dr. Dudley S. Reynolds, the president, made fitting responses to each.

The first item of business was a motion offered by Dr. Geo. Homan, secretary of the Missouri State Board of Health, looking to the issuance by the association of a manifesto, concerning the subject of yellow fever, now prevailing in some of our southern states. The object was to set forth the dangers to be apprehended and the best sanitary means for the prevention or arrest of the disease. A special committee was appointed for this purpose.

After a report from the committee of arrangements, a paper on "Yellow Fever," was read by Dr. C. G. Comegys, of Cincinnati, and discussed by Drs. Bailey, of Louisville, Homan and McPheeters, of St. Louis. This closed the morning session.

In the afternoon a discussion of the subject of "Infant Feeding" was introduced by Dr. J. A. Larrabee, of Louisville, followed by Dr. Cook, of Mendota, Ill.

Dr. C. H. Beard, of Chicago, then read a paper on "Diseases of the Middle Ear," Dr. D. R. Brower, of the same city, one on "Exophthalmic Goitre—Treatment by Strophanthus." Dr. W. Dickinson, of St. Louis, read a paper on "Retinitis Albuminurica," and Dr. C. R. Early, of Ridgeway, Pa., read a paper on "Diphtheria." Brief discussions followed the papers.

Wednesday morning the session opened at 10:30 instead of 9:30 as announced. The first paper was read by Dr. C. S. Bond, of Richmond, Ind., on "Conditions which Precede Serious Lesions of the Kidney." The association by vote requested Dr. Bond to continue his investigations of this subject, and present the results in another paper at the meeting of the association in 1889. Dr. Joseph M. Mathews, of Louisville, read a paper on "Obscure Rectal Diseases," opposing the position taken by Dr. Goodell, of Philadelphia, at the A. M. A. last spring, and claiming that the rectal troubles which Dr. Goodell designated hysteria of the rectum are really local and not reflex in origin. Dr. H. H. Mudd's paper, which was next read, was on "Contusions and Lacerations of the Kidneys—Nephrectomy." Then followed Dr. G. J. Cook, of Indianapolis, with a paper on "Absorption of Water by the Colon

and its Therapeutic Uses," and Dr. Arch. Dixon, of Henderson, Ky., on Hydrogen Gas in the Diagnosis of Intestinal Obstruction," giving the results of a new application of Dr. Senn's application of hydrogen gas as a means of diagnosis.

The afternoon programme was opened by Dr. Wm. Townsend Porter with "A Demonstration of the Effect of Cold Applied to the Abdomen upon the Tracheal Circulation." Dr. Porter said that contraction of the radial artery followed the application of cold cloths to the arm. By a similar action cold relieved the pain of acute inflammation—pain caused by the pressure of swollen vessels or sensory nerves. Heat also relieved this turgidity by dilating the capillary areas surrounding the inflamed part. The action of cold did not stop with the relief of pain. He did not need to describe to such an audience the vascular changes in inflammation. All knew how the blood-stream slowed, how the veins became lined with white blood corpuscles, how, later, blood stasis appeared, corpuscles and serum escaped from the vessels, etc. This vascular damage might be readily repaired even to the point of corpuscular diapedesis. Cold, by contracting the afferent arterioles, by lessening the amount of blood passing to the inflamed part, gave time for the removal of the capillary block, and the restoration of the normal circulation.

They saw before them four cats. The trachea of each cat had been opened with the galvano-cautery knife, and the halves held apart by hooks, passed red-hot through the tracheal walls. These precautions prevented bleeding. Each cat had a large, hot, flax-seed poultice upon its abdomen. The heat so applied had congested the tracheal mucous membrane. After the members had examined the trachea in this congested condition, simulating the first stage of an acute inflammation, the hot poultice would be replaced by iced cloths. They would then observe an instant pallor of the mucous membrane. Previously pink, it would become blanched in less than a minute. But this would not be permanent. After a time the red color returns, and is followed by the bluish-red of venous congestion.

An important lesson was to be learned from this experiment. Cold was a valuable agent in acute inflammatory conditions, and checked the inflammation by diminishing the blood supply to the inflamed area. But if the cold applications were continued too long, there came about venous congestion, blood-stasis, the very

condition most favorable to the destructive changes which were to be resisted.

A recess was then taken, and the physicians examined the tracheas through reading glasses provided for the occasion. Dr. Porter applied iced cloths in place of the hot poultices, and the pallor and subsequent engorgement of the veins were very evident.

Dr. J. M. Emerest, of Atlantic City, read a paper on "Perforating Ulcer of the Duodenum," and was followed by Dr. H. C. Dalton, of St. Louis, with a paper on "Laparotomy for Wounds of the Intestines," giving a report of sixteen cases treated at the City Hospital, eight cases terminating favorably. Dr. Wm. Porter's paper on "Benign Laryngeal Growths," was read by title only. Dr. A. W. Spain, of Terre Haute, Ind., read a paper on "Consanguineous Marriages." Both he and Dr. McKee, of Cincinnati, who has studied this subject carefully, concurred in the opinion that consanguinity is a comparatively trifling factor as compared with the physical health of the parents in determining the quality of progeny. Dr. T. B. Harvey, in a paper entitled "Can a Diseased Fallopian Tube be Treated through the Uterus?" took an affirmative position. Then followed the report of the special committee to prepare a manifesto on Yellow Fever. This was in the form of resolutions which were adopted *nem. con.* and without discussion. The resolutions are as follows:

Resolved, That it is the sense of this meeting that yellow fever is not contagious in the ordinary sense of the term; that it cannot be communicated from the sick to the well, except in an atmosphere containing germs.

That the mildness of the present yellow fever invasion, and the lateness of the season, warrant us in strongly deprecating the fear now existing in many Southern communities, the present rate of mortality being no greater than that which ordinarily obtains in typhoid fever.

That the self-imposed quarantine regulations now in force in the states north of the infected districts are not only absurd, but inhuman, and unworthy of the age in which we live.

That the quarantine regulations, to be effective, should apply to the baggage, clothing and effects, rather than to the person of the individual.

That when such effects come from infected districts they should be destroyed by fire and the owner reimbursed from public funds.

That cities and towns to the north and upon lines of travel may safely provide hospitals for the reception and care of the sick.

Next Dr. Jos. Grindon, of St. Louis, gave an account of the Recent Epidemic of Small-pox at Moberly, Mo., referring it to the importation of a box of clothing from Bohemia. Thursday, in accordance with a vote taken the day before, the association held one continuous session in order to complete the work and get ready for a proposed entertainment. The first paper of the day was by Miss Bryant, M. D., of Chicago, on "Psychical Treatment of the Insane." She advocated the cottage plan of asylum architecture, non-restraint and humane treatment in all respects. Following the reading of her paper Dr. W. C. Chapman, of Toledo, O., gave a brief account of the successful working of an institution at Toledo, which is a practical carrying out of the plans proposed by Dr. Bryant. Dr. F. J. Lutz, of St. Louis, presented a patient illustrating a successful result of "Surgical Treatment of Fractures of the Patella," by wiring the fragments together. Dr. D. S. Booth, of Sparta, Ill., in a paper entitled "What is it?" described the case of a nine year old boy presenting symptoms suggestive of rabies, insanity and idiocy, though on the whole Dr. Booth was disposed to consider it epilepsy. Dr. H. H. Middlekamp, of Warrenton, read a paper entitled "Are Immediate Amputations Justifiable" taking an affirmative position. Dr. J. H. Rauch, Secy., of Ill. State Board of Health, made a statement of his official relations to the Yellow Fever panic and the Cairo quarantine. He was appointed chairman of a committee for further investigation of yellow fever with authority to appoint other members of the committee. Dr. F. R. Fry read a "Clinical Study of Alcoholic Neuritis" and Dr. J. K. Banduy read a paper on "Alcoholism." Dr. Sensenay exhibited an appliance for holding the speculum and thus dispensing with the services of an assistant in treating gynecological cases.

The following officers were elected for the coming year: President, Geo. J. Cook, of Indianapolis; Vice-presidents, J. D. Griffith, of Kansas City, and J. A. Larrabee, of Louisville; Secretary, R. L. Thomson, of St. Louis; Treasurer, W. C. Chapman, of Toledo, O. A. M. Owens, of Evansville, Ind., was elected chairman of the Committee of Arrangements; and Evansville was selected as the point for the next meeting.

Drs. A. P. Waterfield, of Tennessee, and D. A. Larrabee, of Louisville, offered a resolution, which was adopted, setting forth as

the opinion of the Association that the infection of yellow fever can be stamped out by prompt sanitary measures, but that it may become endemic in the southern part of our country unless vigorous measures are adopted, and urging that Congress reorganize the National Board of Health and make adequate appropriations for the purpose of fighting the epidemic.

After a final report of the Committee of Arrangements and the passing of usual votes of thanks the Association finally adjourned.

The social features of this meeting formed no inconsiderable factor toward its success. Tuesday evening the members of the Association were given a complimentary entertainment at the "Last Days of Pompeii," special set pieces of fireworks being arranged for the evening, most notable among which was a colossal portrait in fire of Dr. Jno. T. Hodgen.

Wednesday and Thursday afternoons the little ribbon badges upon the lapel of the coat admitted the members without charge to games of base ball at the grounds of "The Champions of the World." Wednesday evening receptions were given to the members of the Association by Dr. and Mrs. N. B. Carson, Mr. and Mrs. R. C. Kerens, and Mr. and Mrs. J. T. Drummond.

Thursday afternoon when the Association adjourned carriages awaited the members at the door of the hall, and they and their lady friends were taken for a drive, stopping at the Club House in the Fair Grounds, where an elegant collation was served, and a couple of hours passed rapidly in feasting and toasting.

The final entertainment was a complimentary reception at the Exposition with a special musical programme by Gilmore's celebrated band.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

The universal verdict of those who attended the late Congress at Washington is that the meeting was a complete success. The feeling expressed by some that there would develop a spirit of antagonism to the A. M. A. has proved, as we some time ago predicted would be the case, to be entirely unfounded. In his report, as chairman of the executive committee, Dr. Pepper said: "A

large proportion of those interested in the development of such an organization are, as I am myself, warmly attached to the American Medical Association, and determined to exert their influence to maintain and promote the success of this great national organization. All are no less warmly interested in the prosperity of the various special societies to which they severally belong. Your executive committee found little difficulty, however, in deciding upon a plan which would avoid even the least interference with the American Medical Association, while, at the same time it avoided any encroachment upon the independence and autonomy of the special societies." Certainly there is ample field for the work of both organizations, so different are they in character and intent.

The preliminary meeting, or meeting for organization, took place at one o'clock on Tuesday, in the main hall of the G. A. R. building. Dr. Wm. Pepper, of Philadelphia, as chairman of the executive committee, presented the report of that committee. He outlined the recommendations of the committee as to the organization of the Congress, viz., that they hold triennial meetings always in Washington, that the president shall be selected for each Congress by the executive committee then in office. In accordance with this plan the executive committee of which he was chairman had selected for the president of the first Congress Dr. Jno. S. Billings, whom he then introduced, and announced that the Congress was duly organized.

Dr. Billings then introduced Dr. S. C. Busey, Chairman of the Committee of Arrangements, who gave an address of welcome, after which the rules of organization or by-laws recommended by the executive committee were read and adopted by the Congress.

At the evening session Dr. R. H. Fitz, of Boston, opened the discussion upon Acute Intestinal Obstruction with a paper concerning its medical relations, and was followed by Dr. N. Senn, of Milwaukee, on the Surgical Treatment. Dr. Arthur Durham, Dr. Wm. Ord, and Prof. Thos. Annandale took part in this discussion.

Tuesday evening Cerebral Localization was the topic considered. Dr. Rosevelt Park, of Buffalo, N. Y., read a paper on Cerebral Localization in its Surgical Relations. He discussed first cerebral topographical anatomy, when and where to apply the trephine, cerebral and cerebellar abscess, brain tumors, and operative treatment

for such tumors. He had collected reports of 63 cases, in 17 of which operation was made by American surgeons.

Dr. Chas. K. Mills, of Philadelphia, read a paper on Cerebral Localization in its Practical Aspects, and was followed by Dr. M. Allen Starr, of New York, who read one on Cerebral Localization in Reference to Aphasia.

Thursday evening Dr. Jno. S. Billings, the president, delivered his address, in which he presented to the profession many interesting facts as to the uses and value of medical museums and more particularly of the Army Medical Museum, and also detailed the plans for the enlargement and extension of the museum and showed the special needs of the institution.

Among the distinguished guests from abroad were Prof. F. von Esmarch, Victor Horsley, Arthur E. Durham, Reginald Harrison, Grailey Hewitt, Sir Spencer Wells, Sir Wm. MacCormac, Prof. Thos. Annandale, David Ferrier, Wm. M. Ord, F. D. Keegan, Wm. O. Priestley.

Several of these gentlemen read papers before one or more of the societies and took part with interest in the discussions.

Monday evening a banquet was given in honor of the invited guests by members of the Congress. It was served at Willards' hotel and was a very sumptuous affair. Nearly 200 sat down at the tables.

Tuesday evening after the meeting there was a reception at Willards' which was fully attended, and proved an excellent opportunity for members of the different societies to meet and form acquaintances or revive old friendships. Many spoke of this as one of the most enjoyable occasions of the whole meeting.

Wednesday evening most of the foreign guests were entertained by the Climatological Society at Wormley's at an elaborate and elegant dinner.

Thursday evening after the president's address at the hall of the National Museum, an adjournment was had to the new building of the Army Medical Library and Museum where a reception was given. Dr. and Mrs. Jno. S. Billings, assisted by Prof. and Mrs. von Esmarch, did the honors of the occasion, receiving all the guests as they presented themselves. Here also an elegant table was spread for all the guests.

The profession of Washington have done everything possible to further the interests of the Congress and to make the meeting a suc-

cess, and much credit is due to the efficiency of the Committee of Arrangements for the care with which all preparations were made for the facilitating of business, and for the entertainment of the visitors.

The meetings of the general sessions were fully attended, and the papers and discussions were of a high order of merit and pertained to subjects of prominent interests of the day.

The works done by the several separate associations, both in number and quality of papers presented, and in the interest of the discussions is said to have been far above the average, and this is regarded as evidence of the stimulating effect of the Congress upon the worker in the several societies.

The following eleven societies constituted the Congress: The American Surgical Association, The American Association of Genito-Urinary Surgeons, The American Otological Society, The American Ophthalmological Society, The American Neurological Society, The American Dermatological Society, The American Orthopedic Association, The American Laryngological Association. The Climatological Association, The Physiological Society, The Association of American Physicians. In addition to these, the American Gynecological Society which held its annual meeting at Washington at the same time with the Congress made application for membership and was admitted so that there are now twelve societies connected with the Congress.

Two new associations were organized, viz. The Association of American Anatomists, with Dr. Joseph Leidy, of Philadelphia, as president, and The American Pediatric Society with Dr. A. Jacobi, of New York, as president. Besides these societies, the Association of American Obstetricians and Gynecologists held a session at the same time in Washington, but neither of these societies was admitted to the Congress, by reason of a rule adopted that societies are not eligible for membership until they have been in existence for two or more years, and shall have published two volumes of transactions, which must be submitted in evidence of the character of work done. Doubtless all three of these societies will be admitted at the next triennial congress.

Our space will not admit any detailed report here of the work of the several different societies. We can only briefly refer to the business meetings of each.

The American Surgical Association will hold its next annual meeting in Washington commencing the second Tuesday in May. The officers for the coming year are: President, Dr. D. W. Cheever, of Boston; Vice President, Dr. T. W. Richardson, of New Orleans, Dr. Jno. B. Roberts, of Philadelphia; Secretary, Dr. J. R. Weist, of Richmond, Ind.; Treasurer, P. S. Conner, of Cincinnati; Recorder, J. Ewing Mears, of Philadelphia; Additional Members of Council, Dr. W. F. Peck, of Davenport, Ia., and Dr. S. W. Gross, of Philadelphia.

The Association of Genito-Urinary Surgeons elected the following officers for the coming year; President, Dr. R. W. Taylor, of New York; Vice President, Dr. Jno. P. Bryson, of St. Louis; Secretary, Dr. Arthur S. Cabot, of Boston, Mass.

The American Neurological Association elected the following officers: President, E. C. Seguin, of New York; Vice Presidents, Dr. C. L. Dana, of New York, and Dr. Philip Zenner, of Cincinnati; Secretary and Treasurer, Dr. G. M. Hammond, of New York; Members of Council, Dr. J. H. Lloyd, of Philadelphia, and M. Allen Starr, of New York.

The American Gynecological Society will meet next year in Boston, Sept. 17. The officers for the coming year are: President, Dr. H. P. C. Wilson, of Baltimore; Vice Presidents, Drs. W. T. Lusk, of New York, E. W. Jenks, of Detroit; Secretary, Drs. Jos. T. Johnson, of Washington; Treasurer, Dr. M. D. Mann, of Buffalo; Members of the Council, Dr. J. E. Javrin, of New York, Geo. J. Engelmann, of St. Louis, Ely Vander Warker, of Syracuse, and Browne.

The American Dermatological Association is to meet next year at Young's Hotel in Boston, under Dr. Graham, of Toronto, Ont., as president.

The American Orthopedic Association elected the following officers: President, Dr. E. H. Bradford, of Boston; Vice Presidents, Drs. Benjamin Lee, of Philadelphia, V. P. Gibney, of New York; Secretary and Treasurer, Dr. R. W. Lovett, of Boston.

THE ST. LOUIS MEDICO-CHIRURGICAL SOCIETY has placed on its library shelves over one-hundred volumes of bound periodicals.

SELECTIONS.

THE TREATMENT OF DYSPEPSIA.

Inasmuch as dyspepsia is the commonest ailment met with in practice, the treatment should be based upon definite principles, and empiricism as far as possible avoided. The objective symptoms presented by the tongue are of great diagnostic value. Subjective ones, such as sour eructations, are not always to be relied upon, and frequently they are not at all well defined. In the determination of the acute cause of dyspeptic symptoms, the question is not so much one of glands and their secretion, as of mucous membranes and their blood-supply. Every one is familiar with the appearance of the the foully-furred tongue of acute indigestion, from the irritation of indigestible and offensive food stuffs, and with the rapid cleansing effect upon it of full doses of Epsom salts. It may be taken for granted, that when the tongue is furred or coated ever so little, there is congestion to a greater or less extent of the gastric mucous membrane. The coating is due to multiplication of epithelium, which would appear to be a natural consequence of passive congestion. The same effect is observed in psoriasis and seborrhea, in less vascular tissues.

The indication in treatment, therefore, is to relieve congestion. According to Dr. C. R. Illingsworth (*Med. Press*, August 8, 1888), this may be effected, firstly and chiefly, by drugs which have an exosmotic action, such as the sulphate, tartrate, and carbonate of sodium, aloes, rhubarb, etc.; and, secondly, by those which have an endosmotic action, and thus diffuse the stagnating fluid through the blood-vessels. Of these, the carbonates of ammonium, sodium, and potassium are the most important. Others are the nitrates and iodides of potassium and sodium. By thus unloading and flushing the blood-vessels of the intestinal tract, the mucous membrane is

generally restored to a healthy condition, which is at once indicated by a more or less clean tongue. When much pain is complained of, from 2- to 3-minim doses of morphine solution or chlorodyne may, at the same time, be prescribed. But, when the dyspepsia has existed for some time before advice is sought, further measures are needed in addition. The intestinal circulation requires stimulating by *carminatives*, such as cardamoms, ginger, and capsicum. Still more powerful and direct stimulants are found in those drugs which act upon the muscular and nervous tissues of the blood vessels, such as belladonna and nux vomica, the former exerting a stimulant action upon the walls of the blood-vessels through the sympathetic, and the latter through the cerebro-spinal nervous system.

The following is a useful formula:

R _x	Ammon. carb.,	-	-	-	-	-	℥ss to ʒi;
	Magnes. sulphat.,	-	-	-	-	-	℥iii to ʒvi;
	Tinct. belladon.,	-	-	-	-	-	ʒi;
	Tinct. nucis vom.,	-	-	-	-	-	ʒi;
	Tinct. zingib.,	-	-	-	-	-	ʒii;
	Sp. etheris chlorici,	-	-	-	-	-	ʒii;
	Aq. menth. pip.,	-	-	-	-	-	ad ʒvi.

M. Ft. mist.

Cipiat æger semiunciam quartis horis.

When the tongue, by its clean appearance, indicates that equilibrium has once more been restored to the circulation in the alimentary tract, there frequently remains a debility or want of tone in the digestive system, shown by a flabby or loose and pallid state of the epithelium of the organ, coupled with symptoms of anorexia and flatulence. Acids and nux vomica are then of great service, given after meals. Acids are also very useful in the treatment of dyspepsia occurring in elderly and delicate people, whose only complaint is that food "lies like lead" upon the stomach. The tongue in such cases is, as a rule, perfectly clean.

Flatulent colic is an affection of very frequent occurrence, in women particularly. There is not in the first instance any affection of the mucous membrane, for the tongue is generally quite clean, becoming foul only when the colic persists. The mischief would appear to be due to stasis or congestion in the larger venous

trunks, comparable to that which occurs in the respiratory tract in asthma. It is generally caused by cold or exhaustion, and it is always accompanied by collapse. In some cases the gall-bladder is sympathetically affected, as indicated by pain under the edge of the right ribs anteriorly, shooting through the chest to the right shoulder blade. In cases of this nature the indications are the employment of endosmotics, such as the carbonates of ammonium and sodium, for the purpose of obviating the stasis of venous blood, and thus relieving the intense pain caused by the tension of the blood-vessels, and the giving of cardiac stimulants, such as brandy and belladonna, to restore the peripheral circulation, and thus prevent collapse. Thus,—

R	Sp. ammon. co.,					
	Liq. ammon. acetat.,	-	-	-	-	aa ʒiii;
	Ether chlor.,	-	-	-	-	ʒii;
	Tinct. zingib.,	-	-	-	-	ʒii;
	Tinct. belladon.,	-	-	-	-	ʒi;
	Aq. menth. pip.,	-	-	-	-	ad ʒvi.

M. Ft. mist.

Sig.—ʒi omni quadrante horæ vel pro re nata.

Antipyrin and kindred preparations frequently act with great rapidity in such cases as endosmotics, relieving patients thus affected as if by magic; but it is well to keep up their effect with a mixture containing belladonna and ammonia. Local application of heat is also an excellent means of treatment. Morphine relieves the pain but increases the danger of collapse by its depressant action upon the circulation. Hence it should be avoided. In some aggravated cases the mucous membrane is affected, as indicated by foully-furred tongue and constipation. In these, full doses of the sulphate or carbonate of magnesium should be added to the ammonia and belladonna, and also some carminative, such as ginger or cardamoms; while in those cases where there are indications that the gall-bladder is affected with the spasm, a calomel and opium pill will generally suffice to effect a rapid cure. The irritation set up by "flatulent colic" not infrequently affects the arterial capillary system, leading to *stasis* of the blood and sympathetic inflammatory mischief. The diagnostic value of tongue symptoms is here again apparent. The organ presents a dry, hard surface, in-

dicative of the effusion of inflammatory lymph between the mucous and submucous tissues of the affected portion of the intestinal tract. In such cases endosmotic remedies, such as ammonia and liquor ammoniæ acetatis, are alone indicated, to give flowing power to the stagnant blood. With such treatment the pain is soon relieved, and the tongue quickly resumes a moist appearance.—*Therap. Gaz.*, September, 1888.

A FEW WORDS ON A CERTAIN KIND OF INSOMNIA.

BY F. EKLUND, M. D., STOCKHOLM, SWEDEN.

The two most reliable signs of perfect health are, firstly, absence of pain; and, secondly, the ability of sleeping tranquilly and soundly.

But, unfortunately, the above state is comparatively rare, as the actual number of those who are victims of this most trying and serious affection—insomnia—is very great, and, moreover, is still on the increase.

As it would be beyond me to enter into a minute or exhaustive treatise on the subject, I must content myself with giving the reader a short account of a certain kind of insomnia which is most frequently met with, and which at the same time is most difficult to treat. I refer especially to the insomnia caused by malaria.

Guided by the experience of many years, I will, in as few words as possible, jot down the results of my observations concerning the different symptoms and forms of the malady. Serious mistakes may result, if the cause of any insomnia be either mistaken or unknown.

First, we have a group of patients who sleep neither day nor night. It seems an utter impossibility for them to close their eyes or rest for a moment. All during the long night-watches they lie wide awake and count each stroke of the clock, and are painfully conscious of every sound. They are tortured by their own thoughts, and arise in the morning tired out instead of refreshed, scarcely able to get about, and almost entirely unfit to attend to their daily duties. During the day they sometimes feel over-powered by sleep, but when night comes again it is only a repetition of the previous

one, and again the morning dawns without the patient's having enjoyed a moment's sleep.

In another form of this complaint, when the patients have once awakened they find it utterly impossible to get to sleep again, after, perhaps, a rest of only two or three hours at the very longest. Nevertheless, they will feel strengthened and refreshed by this short sleep sufficiently to be able to attend to their business, during which, however, they frequently break down, overcome by fatigue, their limbs seeming to give way under them.

To a third class of insomnia belong those patients who are able to sleep well upon retiring, but who always wake up at a certain time or moment. If it be on the hour, they will always start up out of their slumber while the clock is still striking, and after that there is no sleep for them for the rest of the night. When they awake they state that their short rest seems to have perfectly refreshed them, but they are usually subject to slight chills and fever and sweating, also to neuralgia and lumbago, and frequently to exhaustion.

It is most frequent upon careful examination of such patients to find that they for some time past have been suffering from intermittent fever, and are thus under the continued influence of malaria, and intermission is always more or less evident.

It is my intention to endeavor to give a natural and plausible explanation of the cause of this peculiar insomnia, and it will be hardly necessary for me to add that my conclusions are not based on hypothesis, but on practical experience.

It is a well known fact that certain alkaloids, such as caffeine, theine, and theobromine, have the property of causing wakefulness.

It seems very probable to me that the microbes of malaria might produce a similar pathological action in many respects to that caused by the above-mentioned alkaloids. It is evident that these microbes are contained in great quantities in the veins, and also in the smaller vessels of the pia mater and the large ganglions of the brain. Here they may act as a most delicate "reagent," by means of which the existence of malaria may be proved,—viz., by their effect in producing insomnia of the patient.

Regarding the treatment of such malaria I have invariably obtained the best results by using quinine.

The treatment generally restores sleep to the patient in a very short time. The following is the formula I mostly use:

- R. Quin. sulph., .40 to 1 grm. (6 to 15 gr.) ;
Sod. bicarb., 1 to 2 grm. (15 to 30 gr.). M.
S.—F. tal. dos. No. xii. ad caps. amyl.

Take 1 powder or capsule every morning, and, if the case require it, 1 in the evening.

I found this formula to be most useful. I used the sodium bicarbonate because in most cases the patients were greatly troubled by symptoms of chronic gastric catarrh, which was relieved by its use. In some special cases I found quinine combined with dilute phosphoric acid to be of great value, in the following formula:

- R. Quin. sulph., 4 grm. (60 gr.) ;
Acid. phosphor. dilut., 5 grm. (75 gr.) ;
Syrup. zingib., 30 grm. ;
Aq. dest., 120 grm. M.
S.—A tablespoonful twice a day.

It will perhaps be unnecessary for me to state that I am bitterly opposed to the use of morphine, chloral, or any other narcotic or soporific in such cases. All my honored colleagues agree with me as to the danger of the use of such drugs in this affection. Instead of doing good, they augment and heighten the disease more than the microbes themselves do. In connection with this comes also an overwhelming sensation of excessive fatigue and mental depression, accompanied frequently by increased sexual desires and a morbid anxiety about business, etc.

I have furthermore found a hydropathic treatment to be of great service in the treatment of such insomnia, and usually administer a hip-bath twice daily. The temperature of the water should be from 28° to 32° C., and the patient should remain in the bath for two to four minutes. The water should cover the navel. It may be necessary for the patient to take a course of forty or fifty such baths during treatment. After the bath the body and limbs should be washed and then well rubbed. A bucket of cooler water (say 18° to 20° C.) may be poured over each shoulder, and later, after ten such baths have been taken, the patient should take a cold shower (10° to 15° C.) for about twenty seconds or a minute, and should then be well dried and rubbed. A massage treatment has also good effects.

In advanced stages of the malady friction should be used with a bath-towel dipped in tepid, fresh, or even cold water, as soon as the patient has gotten up.

As for my personal experience, I have spent many days and nights in the marshes; indeed, for the last eight years have lived and practised in a marshy country, and have found the above treatment to be most invaluable both in treating my patients and myself.—*Therapeutic Gazette*, Dec. 15, 1887.

MINUTE THERMOMETERS.—Dr. Boileau remarks that it is the maximum temperature of the part when removed from the cooling influences of the surrounding air that we desire to know; and it takes some time longer than a minute to get it. When a thermometer is first placed in the axilla, that part of the body has been usually more or less exposed to the external air; when the elbow is brought to the side to exclude, as much as possible, all external cooling influences, the temperature of the axilla begins to rise, and in five or more minutes it reaches a maximum. How can this maximum (the temperature required for the purposes of diagnosis and prognosis) be measured by any instrument until it is attained?—*Maryland Med. Jour.*, Aug. 25, 1885.

DR. J. M. DACOSTA declined to accept the usually compensation given to the Middleton Goldsmith lecture, and requested the New York Pathological Society to apply the amount (\$100) to any purpose which might seem desirable. The trustees decided that the most fitting tribute to Dr. DaCosta's generosity would be to purchase some microscopes for the use of the society, and requested Dr. DaCosta to procure them. He has procured two microscopes, one having an Abbe condenser and a one-fifth objective, the other having no condenser and being of low power.—*Coll. and Clin Rec.*

MEDICAL INCOMES IN KANSAS CITY.—A certain prominent physician in Kansas City asserts that he is making \$20,000 a year, cash, from his practice. What was the name of Sapphira's husband?—*Med. Rec.* Sept. 29.

NOTES AND ITEMS.

CONNECTION OF DISEASE WITH INTEMPERANCE.—The Committee on Collective Investigation of the British Medical Association summarize the results of their researches on this subject as follows:

On the whole, then, in addition to the information that we obtain from these returns as to the alcoholic habits of the inhabitants of this country, and as to the relative alcoholic habits of different occupations and classes, we may not unfairly claim to have placed upon a basis of fact the following conclusions:

1. That habitual indulgence in alcoholic liquors beyond the most moderate amounts has a direct tendency to shorten life, the average shortening being roughly proportionate to the degree of indulgence.

2. That of men who have passed the age of twenty-five, the strictly temperate, on the average, live at least, ten years longer than those who become decidedly intemperate.

3. That the production of cirrhosis and gout alcoholic excess plays the very main part which it has long been recognized as doing, and that there is no other disease anything like so traceable to the effects of alcoholic liquors.

4. That in cirrhosis and gout apart, the effect of alcoholic liquors is rather to predispose the body toward the attacks of disease generally than to induce any special pathological lesion.

5. That in the etiology of chronic renal disease, alcoholic excess, or the gout which it induces, probably plays a special part.

6. That there is no ground for the belief that alcoholic excess leads in any special manner to the development of malignant disease, and some reason to think that it may delay its production.

7. That in the young alcoholic liquors seem rather to check

than to induce the formation of tubercle; while in the old there is some reason to think that the effects are reversed.

8. That the tendency to apoplexy is not in any special manner induced by alcohol.

9. That the tendency to bronchitis, unless perhaps in the young is not affected in any special manner by alcoholic excess.

10. That the mortality from pneumonia, and probably that from typhoid fever also, is not especially affected by alcoholic habits.

11. That prostatic enlargement and the tendency to cystitis are not especially induced by alcoholic excess.

12. That total abstinence and habitual temperance augment considerably the chance of a death from old age or natural decay without special pathological lesion.—*Brit. Med. Jour.* June 22.

INTERNATIONAL CONGRESS OF HYDROLOGY AND CLIMATOLOGY.—The second triennial session of this Congress will be held in Paris early in October, 1889, one year from this time. A committee of organization has been appointed, and it is the purpose to have at that time addresses, papers and discussions on the following topics:

I. A.—*Scientific Hydrology.*

1. Precautions to be taken for the exact determination of the temperature of thermal springs.

2. The micro-organisms contained in mineral waters, and their influence upon the composition and properties of these waters.

3. The influence of bacteriological researches upon thermal therapeutics.

4. Programme for a course of instruction in hydrology.

B. *Medical Hydrology.*

1. The resources which thermal therapeutics offer in the treatment of diseases of the heart and blood-vessels.

2. Resources offered in the treatment of diseases of the kidneys.

3. Mineral water treatment of severe utero-ovarian neuralgias

4. Mineral water treatment of diseases of bones and joints.

5. Mineral water treatment and sea bathing for children.

6. Dry and moist hot-rooms (?) (technique and application).

7. Local douches.

II. *Climatology.*

1. Conditions to be observed in the establishment of a meteorological observatory.

2. Rules for predicting the weather organization for the reporting of the weather at the sanitary stations.
3. Climatology of different sanitary stations.
4. Comparison and classification of the sanitary stations as regards their climatological conditions.
5. The action of climates of high altitude on affections of the chest.
6. The action of maritime climates on tuberculous affections.
7. Programme for a course of instruction in climatology.

Doubtless some of our American practitioners who have been giving attention especially to studies in climatology will be able to contribute some papers of great value to this department which until recently has received much less careful consideration in our country than in Europe.

DIRECTIONS TO THE PATIENT are, in America, no longer written in Latin, for our druggists could not translate them. Even the common expression, *pro re nata* has been rendered "for the baby just born." *Maneat in lecto*, "let the patient remain in bed" has been translated, "to be taken in milk in the morning," while *mane in lacte* has been rendered "remain in bed."—*The Language of Medicine*, p. 53.

UNITED STATES DISPENSANORY.—The J. B. Lippincott Company announce a new edition of the United States Dispensary. The revision has been thorough, and not merely the addition of a supplement. More than one-third of the book, or nearly eight hundred pages, is entirely new matter, while the whole work has been most carefully rewritten. The National Formulary has been incorporated.

THE MASSACHUSETTS MEDICAL SOCIETY numbers 1690 members. At its one hundred and seventh annual meeting in June the society repealed the resolution which has hitherto prevented even the presentation for examination for admission to the society of any person not a graduate of certain medical schools approved and recognized by the society.

THE TRANSACTIONS OF THE INTERNATIONAL MEDICAL CONGRESS are said to have cost \$18,300 for printing and binding.

ONE of the most interesting displays in the St. Louis Exposition, viewed from a professional standpoint, was the exhibit of the St. Louis Dairy Company with their laboratory, where were demonstrated and explained to all interested the methods used for testing the quality of milk supplied their customers. The apparatus for separating the cream by centrifugal force and measuring its percentage upon a scale attracted much attention.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION will hold its annual meeting in Birmingham, Sept. 11, 12, 13. Papers have been promised by a large number of the leading surgeons and gynecologists of the south, and the local committee is doing everything to make the meeting both profitable and enjoyable.

JEFFERSON MEDICAL COLLEGE, of Philadelphia, has lengthened its regular winter session to six months, which with the spring and fall courses of lectures gives an eight months course of instruction.

The announcement is also made that with the winter session 1890, a three years' systematic obligatory curriculum will begin.

NEW YORK POLYCLINIC AND HOSPITAL.—We learn from the seventh annual announcement of this school for graduates just received that the attendance during the last session numbered 337. Drs. H. N. Heinemann and C. Stedman Bull, have been appointed professors respectively of General Medicine and Ophthalmology.

THE OMAHA CLINIC is a new sixteen page journal, of which the number we have seen evidences editorial ability and energy. The editor is Dr. J. C. Denise with the assistance of Drs. Jas. Carter and J. E. Summers, Jr.

We wish the new journal success and its editor prosperity.

ST. LOUIS DRUG STORES.—There are said to be 243 retail drug stores in St. Louis. The correspondent of *The Western Druggist* remarks a tendency to concentration of business which favors the larger stores down town and works against those farther out.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.—The meeting of the Association has been postponed from the 11th, 12th and 13th of September till the first Tuesday in December, owing to quarantine against yellow fever.

THE MEMPHIS MEDICAL COLLEGE has been made the victim of an attempted forgery of diplomas by a former member of its faculty. Fortunately the attempt was discovered in time to prevent any serious injury to the institution.

THE CATSKILL MOUNTAINS are yearly attracting more attention as a health resort. In climate advantages it compares favorably with the region of the Adirondacks and is much more accessible than the latter region.

THE TEXAS HEALTH JOURNAL commences its first volume with July, 1888. It is the only health journal published in the south, and has every opportunity for a large success. We wish all prosperity to the new journal.

HYPODERMIC MEDICATION. A new special journal has been started in Paris devoted to hypodermic medication and medical asepsis by means of hypodermic medication.

BLUE LINES for writing paper are said by the school commissioners of Maine to be bad for the eyes. It is ordered that all school writing papers shall be ruled with black.

THE BEAUMONT HOSPITAL MEDICAL COLLEGE, of St Louis, announces a regular six months' course of lectures with a preliminary course of one month additional.

WASHINGTON HOTELS are said by the doctors who attended the Congress, to give the poorest accommodations at the highest prices of any hotels in the country.

DR. S. WEIR MITCHELL received an honorary degree from the University of Bologna on the occasion of the eight hundred anniversary of its foundation.

THE EASTERN DISPENSARY OF NEW YORK CITY pays its attending physicians and surgeons a yearly salary of \$400, and to the district or visiting physicians \$500. The former give two hours service daily, and the latter two and a half hours daily.

GARBAGE CREMATION.—It is said that Philadelphia is considering the project of burning her garbage as is now done in Chicago and Montreal.

DISTINGUISHED FOREIGNERS were noticeable for their absence from the M. V. M. A.

DR. A. Y. P. GARNET, of Washington, D. C., died suddenly July 11, 1888, in the sixty-seventh year of his age. He was born in Essex Co., Va., graduated from the University of Pennsylvania in 1841, served in the U. S. Navy till 1848 when he settled in Washington. He served in the southern army during the war, and after its close returned to Washington and had a large practice there, especially among the southern residents. He was an active worker in the preparatory arrangements for the Ninth International Medical Congress, and was elected President of the American Medical Association in 1887.

DR. JOHN LAUGHTON died in St. Louis September 4, 1888, having been for years the oldest medical practitioner in the city. He was born in Charlestown, N. H., in January, 1802. He studied medicine and practiced there and in New York State until 1839, when he removed to St. Louis, and had resided here ever since. He was one of the founders and for many years was one of the trustees of the St. Louis Medical College. For many years he had a large and remunerative practice, and acquired a comfortable competency, but lost his property by becoming security for friends who were embarrassed financially.

He lived a bachelor, abstemiously and frugally, and during the last years of his life was in very reduced circumstances, though relieved from want by the kind ministrations of friends. He died at St. Luke's Hospital, and was buried in Bellefontaine Cemetery.

ST. LOUIS COURIER OF MEDICINE.

VOL. XX.

NOVEMBER, 1888.

No. 5.

ORIGINAL ARTICLES.

TWO KNEE-JOINT EXCISIONS.

BY A. J. STEELE, M.D., *Professor of Orthopedic Surgery and Joint Diseases St. Louis Post-Graduate School of Medicine.*

[*Read before the American Orthopedic Association, Washington, D. C.,
Sept. 20, 1888.*]

WITHIN the past eight months I have done two arthrotomies of the knee, which, while illustrating the two abnormal conditions for which excision is usually made, contain some points of such special interest that I deem it may not be unprofitable to briefly consider them.

One was a case of chronic joint trouble in a lad aged 9 years, first observed in early childhood, preceded by an injury to the left knee. He had previous to the operation been under my observation for three years, during which time immobilizing appliances such as plaster of Paris, sole leather, Thomas' and Judson's splints, patten and crutches, gave relief from pain, prevented flexion of knee and posterior displacement of tibia. The ung. iod. co., the hot douche, the rubber bandage, recumbency in bed with weight extension were all successively and faithfully employed, but the joint remained swollen and hot, and painful if disturbed. At one time I tapped the joint removing

mixed pus and synovia, which afforded temporary relief only. The general health continued fairly good until latterly when diurnal fever and impaired appetite and dull pain so manifestly reduced his strength that operative interference seemed imperative. So, in the early part of July last, at the Augusta Hospital for Children, I operated on the knee, expecting to do arthrectomy, that is removing only diseased tissues, but exposure of the joint disclosed such extensive destruction that the more radical excision was deemed best.

The patient was anesthetized with chloroform, antiseptic precautions observed, the limb elevated until bloodless, then a rubber bandage carried tightly around the upper part of the thigh. A curved incision was made above the patella, concave downward, the extremities of the cut extending well backward, the better to allow for drainage. The quadriceps tendon was divided and the knee-cap turned down. Flexion of the joint exposed its whole interior cavity, pus filled the space and extended well up in the pocket under the tendon, to gain still freer access to which the stump of the tendon was divided longitudinally. The interarticular cartilages had disappeared, the perisynovial tissue was thickened, the synovial membrane pulpy, fungous, gelatinous, and the ligaments softened. The curved scissors were used freely in clearing away the inner lining of the joint, and when they were not efficient the spoon was brought into requisition. Erosion of the cartilages and superficial caries of the bone ends had occurred to such extent that it was found necessary to saw off slices from both tibia and femur, and to remove the patella entire: some scooping out and tunneling, especially of the tibia, was practised. No oozing of blood occurred, and no vessels were found to ligate. The infected tissue being all well cleaned away and the parts irrigated with the bichloride solution, the leg was extended, the bones brought into good apposition and pinned together by three steel wire nails: Chassaignac's tubes were carried out of the lower ends of the cut, draining the popliteal space, the interior of the joint and the sac under the quadriceps tendon. Iodoform was sprinkled into the wound, and the cut edges brought together with interrupted gut sutures, more iodoform, then antiseptic gauze and cotton completed the dressing. Strips of ve-

neering were bound on the limb to immobilize the parts, the extremity elevated, the rubber band removed from the thigh, and the patient put to bed.

Recovery from the chloroform was tedious, and after some hours it became evident from the discoloration of the dressings that considerable oozing was taking place. The wound had been dressed and the limb put up with the expectation of allowing it to remain many days so I was loath to disturb it. But the oozing continuing, attended with complaint of pain and with one or two degrees increase of temperature, I removed on the third day all the dressings. The parts were swollen but aseptic. After irrigating and redressing the wound, a plaster of Paris splint was applied to the limb, to the thigh above, to the leg below, connected by a flat iron bar at the back, and the same in front of the knee but curved or arched so that free access could be had to the wound and it dressed without disturbing the oneness of the limb. It was then swung from the ceiling and thus made very comfortable for the patient. The dressings were renewed twice a week, there being a slightly colored oozing but no pus. The steel pins, two of which had been driven from below upward through holes drilled in the tibia, and one from above downward through the femur were readily removed, being loose, about the third week. The head of one nail was lost in the wound, covered, but as the precaution had been taken to tie a carbolized silk thread to it, no difficulty was experienced in finding and removing it. The drainage tubes, which had been shortened from time to time, were also removed during the third week.

At the end of the fifth week the plaster of Paris splint was substituted by a silicate of soda bandage and the patient allowed to be up on crutches with a patten on the opposite shoe.

Within a week after the operation the patient's general health improved and has so continued up to this present when he has gained greatly in flesh and is almost robust; nothing in the way of medicine being taken except the syr. hyphosph. co. The wound is healed except a spot the size of a pea on the inner side, which I believe to be superficial. The bony union seems firm, for he uses the limb with apparent impunity, though still

wearing for safety, crutches and two light side splints; no perceptible shortening is observed between the two limbs.

The other case in which excision was done was that of a female, æt. 18 years, with firm ankylosis of the left knee at about a right angle. On making passive efforts at extension a click or locking was observed. There was no inflammation, swelling or pain in the joint; the head of the tibia was somewhat displaced backward or upward; the leg was $1\frac{1}{2}$ inches shorter and in every way smaller than its fellow; the foot everted; general physical condition excellent.



CASE. I.

Nine years previous the knee had been injured by a fall. No medical attendant was called, though great local disturbance resulted and the patient was laid up for weeks. The ultimate result was flexion and ankylosis. The patient gave an opinion that the knee had been broken; irregular contour of the part seemed to corroborate such view, however the removed specimen does not show it unless of the inner head of the tibia.

Last December, at the Post-Graduate School, the patient being etherized, I made a semilunar incision from one femoral condyle to the other, below the patella, the ends being carried well

back to insure drainage; the flap was dissected up and the joint exposed. Hemostatic forceps were applied to bleeding vessels. The lateral ligaments were divided and disarticulation attempted but unsuccessfully, as the patella was found firmly adherent to the outer femoral condyle, extending to and bound down to the tibia. The condyles were cleaned and a flat saw used to separate them from the shaft, then the blade of a Butcher's saw was passed behind the joint and the articulating surface of the tibia separated by cutting forward. Thus the bones involved in the joint were removed *en bloc*. The limb was extended and fair coaptation of the cut surfaces had; the better to hold them together two bone pins, a trifle more than $\frac{1}{8}$ of an inch in diameter, were driven from below upward through the tibia, holes having been drilled for the purpose, obliquely on into the femur, an inch of each pin being left projecting above the skin.

The hemostatic forceps were removed, the exposed surfaces dried and sprinkled with iodoform, two drainage tubes were placed at the most dependent part of the wound, the edges coapted with catgut stitches and over the whole antiseptic gauze placed with absorbent cotton and oil-silk. The temptation was great to remove the redundant integument but was resisted, as I believed in time it would be absorbed and contract down: it did however give trouble, as I may explain later on. The limb was raised to a vertical position and placed in a well padded bracketed wire splint, as advised by Ashhurst, and so fixed with broad adhesive strips; the patient put to bed, and splint suspended from the ceiling.

Recovery from the ether was most happy, no nausea or headache resulting. During the first seven or ten days the temperature remained elevated two or three degrees, and the pulse increased in frequency. On several occasions pills of opium were required to allay painful twitchings or startings of the muscles of the limb. After the second day the wound was dressed daily with carbolized oil, dry dressings and oil-silk. There was incidental swelling at first which however soon subsided. The cut edges united readily, the stitches softened and disappeared. There was little or no pus at any time; as it or moist secretions

seeped into the drainage tube they were absorbed or mopped out with a cotton holder.

As to the behavior of the bone pins: At the end of three weeks the projecting end of one was found to be loose, and was picked out bringing $1\frac{1}{2}$ inches of that beneath the surface. It had broken in two pieces so that the distal half still remained buried. I did not apprehend trouble from this piece, as I believed it would soften and be absorbed. A few days later the second pin was readily picked out entire, having undergone slight disintegration.

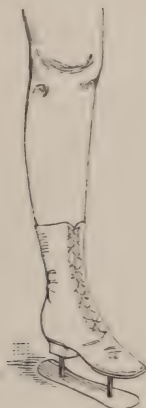
One drainage tube was removed at the end of three weeks, the others still later.

After six weeks the bracketed splint was replaced by plaster of Paris, which, three weeks later was substituted by a sole leather splint, laced in front, accurately fitting the limb, having been moulded over a plaster cast; the bones were firm and in good line, and the patient gotten up on crutches. The general health, somewhat detoned by the long confinement, rapidly improved after she was up and about. The redundant integumental tissue of the upper flap from the pressure of the splint, over-rode the lower flap and broke away from its adhesions for an inch or more. This complication delayed the result and prompted the wish that this too much skin had been removed. It was however overcome by being drawn back and into place with adhesive plaster.

The limb was found to be three inches short, due not only to the $1\frac{1}{2}$ or 2 inches of bone removed but also to the previous shortening incident to non-use, and possibly to premature ossification of the upper tibial epiphyseal junction at the time of the joint injury and subsequent inflammation. A patten equalized the limbs and rendered locomotion easy.

So soon as it was prudent for the patient to travel, she left us for her distant home. Some weeks after her arrival she wrote me that the scar where one of the pins had been driven in had become sore and broken open with matter discharging. I at once suggested that the piece of broken pin left in was acting as an irritant and would spontaneously come away or have to be removed. Later information verified the truth of my opinion for the fragment

so presented itself as to be readily removed. It was sent me and found to be considerably eroded. The opening closed and has given no further trouble. A letter received within the past month remarks: "I am getting along splendid, I limp but a very little, and do not use the cane but a very little, and I can walk pretty fast." On another occasion she enthusiastically expressed her gratitude for the relief afforded by the operation and suggested how immeasurably preferable was her condition now to what it was formerly.¹



CASE II.—RESULT OF EXCISION FOR RIGHT-ANGLED ANCHYLOSIS.

REMARKS.—As previously indicated, we have in these cases illustration of the two usual conditions for the relief of which excision is advised, viz., joint disease and ankylosis. And while they have met the same fate, they were alike also in having a similar beginning, similar in having the same tissue or structure primarily pathologically affected, inflamed, namely the syno-

¹ The specimens removed were exhibited to the society, showing, in the one case extensive erosion of the three bones of the joint; in the other case the adaptation of the bones to each other from their long fixedness in the flexed position, and the elongation downward of the condyles, especially the inner.

vial membrane, in the first case, assuming the chronic, pulpy form, extending ultimately to other tissues and resulting in destruction and suppuration; in the second case acute and simple in character, proceeding to resolution but with the usual accompaniment of flexion and fixation. Similar too, in our belief, that if early and persistent treatment, immobilization, had been instituted, useful joints would have been saved in either case. And the query might be put just here: Was such an heroic measure as excision necessary at the time these cases were operated on? Is this operation ever necessary, or best? The profession is still divided as to its propriety and advisability. Individually I am markedly conservative, and do believe that while the substitution of excision for amputation, as practiced by Sir William Ferguson and others was a great advance and commendable, yet that as the operation became familiar, the pendulum of excision swung out too far and many joints were sacrificed that might have been saved. To-day they would be, for we have a better knowledge of their pathology, and more correct methods of treatment, and improved appliances. A reactionary feeling, even in England where a few years since this operation was common, has taken place. To illustrate this: Not long since I attended a meeting of the Abernethian Society, composed largely or entirely of St. Bartholomew's men. The subject of the evening was injuries and acute diseases of the knee-joint. Short papers were read and pathological specimens and therapeutic appliances exhibited. Cases present and past occurring in the hospital were referred to. The subject of excision received its share of attention, and was very generally condemned, the disease for which the operation had been made in some cases returning, and in other cases the limb becoming deformed and flexed. We observe that Mr. Marsh, one of Bartholomew's surgeons, is very guarded indeed in recommending this operation; doubtless he reflects the views of his school, as additionally shown in its society. Nevertheless this operation has its place: there is a time when it may be demanded. To recognize that and act promptly is our duty.

Case I was rapidly going on from bad to worse, locally and constitutionally, under conservatism. Arthrectomy, arthrotomy

or amputation, one or the other was imperatively called for. Certainly not the latter; that might find place as *le dernier ressort*, if the others failed. The scraping we had hoped might do, but the advanced destruction, as inspection of the specimens will show, evidences that it would have been without avail. We regret the stiff knee but better that and life saved, or far better it than a wooden substitute.

Could case II have been otherwise relieved? Believing the ankylosis to be false, we tried gradual extension of the limb but without effect, except to pain and disgust the patient. Could the patella have been subcutaneously detached and the limb forcibly straightened? We think not. Nine years in malposition had so changed the normal relation of the parts that it would have been impossible to have extended the knee. The ham-strings and fascia could readily have been divided, but the posterior and crucial ligaments were structurally shortened, firmly holding the bones in their new relation, and more than all, the condyles of the femur having been unopposed many years had grown downward, from being circular they had become elliptical, pointing down, thus presenting an insuperable barrier to extension.

Mr. Macnamara says that in some instances "the abnormal growth of bone has been due to deficiency in the controlling or compensating presence which the structures of the body exercise upon one another, in order to keep their nutritive functions properly balanced and the machine in perfect working order. An example of this principle, as Prof. E. Wagner remarks, is 'seen in the ordinary form of genu valgum, *e. g.*, of bakers, which occurs through excessive growth of the internal condyle of the femur; this arises from want of resistance exercised from the corresponding portion of the tibia during standing for hours at a time with bent knees.' In the same way we explain the excessive growth of a tooth in one jaw when the corresponding one in the other jaw is absent." He further adds, "I may refer you to this specimen of the lower end of the femur taken from the knee of a girl who had suffered some years from disease of the joint. The upper end of the tibia was drawn backward by the ham-string muscles, and the lower articular surface

of the femur, having been relieved from the pressure which in health would have been continually exercised on it by the tibia, had become hypertrophied.

We can, therefore, readily comprehend the reason why we sometimes experience difficulty in rectifying the mal-position of the limb produced from a long standing disease of the knee-joint. We may divide the tendons of the ham-string muscles, bands of contracted fascia, and break down the ankylosis which often exists in cases of the kind, and thus for a time bring the ends of the tibia and femur into apposition, but our efforts fail in keeping them there, and the leg gradually reverts to its flexed position on the thigh, the truth being the condyles of the femur have become hypertrophied anteriorly, and until we remove them the tibia necessarily slips behind the enlarged portion of the bone.¹"

Thus if in our case we had divided all the resisting tissues and employed extreme force to have straightened the limb, it would not, according to Mr. Macnamara's testimony, have remained. Again, there is danger in such attempts; the popliteal artery has been ruptured; and I once assisted in a case where both knees were straightened with force, and the patient died of tetanus on the third day.

Inspection of the specimen removed will corroborate the above statement, and show the wisdom of the plan adopted.

A few words now as to the technique of the operation, and, first, as to antiseptic precautions. In case I it was strict, in case II partial only, and yet both did well. Possibly, as a friend suggested in No. II, there was no soil for the germs, the system resisted them. Still, I am a firm believer in the advanced teachings of the day. It were a crime to omit any precautions that we believe would minister to a successful result. In the suppurating joint antiseptics was the more necessary, in the healthy joint asepsis possibly only was required. In bone surgery I have sometimes been afraid of the irrigator lest matter be forced into the little bony canals.

Second, in anesthetizing children I use chloroform, adults, ether, and if in the former, one meal, and in the latter, two

¹ Clinical Lectures, London, 1878.

meals are omitted preceding the operation, nausea and after disagreeable results are prevented.

Third, the limb was rendered bloodless in case I by elevation, and kept so by the rubber band, and in case II no precautions were used, the arteries being seized with the forceps as they sprung. In the one case there was troublesome oozing, in the other, none, the error in the first case being that the limb was not kept elevated for twenty or thirty minutes after the removal of the constrictor until firm clots had formed in the vessels. Dr. H. Lennox Hodge used the Esmarch bandage in excision of the knee in a little girl. The wound was dry when closed, but a few hours afterward, when the patient had become warm in bed, reactionary bleeding occurred and the patient died.

Fourth, the simplest cut to expose the parts is made from condyle to condyle below the patella, the extremities carried well back for efficient drainage. Additional drainage can be had by transfixing the popliteal space. In arthrectomy the incision had best be made above the patella, the quadriceps tendon divided, and the knee-cap turned down. Thus access is had, not only to the articular surfaces of the joint, but also to the sac extending up under the tendon. After the cleaning of the joint the patella is turned up and the tendon stitched.

Fifth, as little bone as possible should be sacrificed, transversely the saw cut should be parallel to the articular surface, antero-posteriorly, obliquely downward, thus the cut tibial surface butts against the femur and prevents posterior displacement, to which there is a tendency.

Sixth, the adoption of pins, the better to hold the bones in apposition, is advisable: they prevent displacement and stimulate the callus. It is possible that ivory pins well antiseptized might be driven in and allowed to remain. This, however, was not my experience with the bone, it acted as a foreign body. If then the pegs are to be removed, steel nails were preferable, to be withdrawn after three weeks.

Seventh, if strict antisepsis has been observed, permanent encasing splints may be used, veneering, binders' board, metal, etc., with the intent of not disturbing the dressings under three or four weeks; but if access to the parts is desired, the bracketed

wire splint of Ashhurst is convenient, or plaster of Paris interrupted at the joint by metal strips may conveniently be applied. Comfort may be secured by suspending the limb. Later on, silicate of soda or leather makes a light and efficient splint while the patient is on crutches. The splint had best be worn for many months, as there is a tendency to flexion, probably due to the ham-strings, which, as the patient walks, contract. Might it not be well to tenotomize these tendons?

The results of excision of the knee in this country have been better than in England. Probably our material is better, less constitutional taint, and closer antiseptic precautions.

There are those who still openly assert that amputation were preferable. To such an authority says: "The surgeon's first thoughts should undoubtedly be of excision, for when successful the result is immeasurably superior to the best results of amputation. The surgeon should choose excision, for by so doing, he will probably succeed in preserving for his patient a limb better than any artificial substitute."

In my early practice I had from joint diseases unfortunate and even fatal results where now I would expect lives saved and limbs useful. But even now in the spirit of our conservatism, cases will go on from bad to worse, owing to depraved constitutions on the part of the patients, or meddlesome interference on the part of friends, or the cases apply when so far advanced that arrest is impossible, then measures more heroic than orthopedic appliances find place. The knife and scissors and spoon and saw are called in requisition for the removal of what nature would not transform; and now, with our antiseptic procedures, we adopt operations and undertake with assurance cases that would have been fatal in the past, and we now assure results that before were only hoped for.

PROF. WM. OSLER has resigned the chair of Clinical Medicine at the University of Pennsylvania, and goes to Baltimore to take the chair of Practice at the Johns Hopkins University, being also physician to the hospital.

A CLINICAL STUDY OF ALCOHOLIC NEURITIS.

BY FRANK R. FRY, A. M., M. D., *Clinical Lecturer on Diseases of the Nervous System, St. Louis Medical College; Consulting Physician St. Louis City Hospital on Diseases of the Nervous System.*

AN American physician, Dr. Jackson, of Boston, described alcoholic paralysis in 1822, calling attention to certain conditions of the nervous system, more or less characteristic of the drinking habit. His is the first recorded clinical account of the affection. He did not, however, understand its pathology.

Dumenil, in 1864, first drew attention to the neuritic origin of the motor and sensory disturbances of alcoholic paralysis. In 1876, Eichhorst demonstrated in a case of acute general neuritis, degeneration of the peripheral nerves without any pathological changes in the brain or cord. Within the next four years, Joffroy, Leyden, Lancereaux and Grainger Stewart demonstrated the same fact in many cases, giving an impetus to the work that has followed. For the last five or six years the phenomena of multiple peripheral neuritis have been under close clinical and microscopical scrutiny. Data have accumulated rapidly, until neurological literature especially, and general medical publications as well, have been so full of the subject, particularly for two years past, that the characteristics of the various forms of neuritis are becoming well known. Conditions that went unobserved a few years ago, or if observed, were not understood, now have a well written clinical and pathological history, within reach of the profession everywhere, forming a satisfactory basis for our present and future study in this field.

CASE I. Mrs. C. B., æt. 26, housewife. I saw patient first Jan. 9, 1888. Temperature, 102.5° F, the pulse and respirations correspondingly increased. She lay in a condition of semi-stupor, her mind wandering, only answering questions and conversing when temporarily aroused, the contents of bladder and bowels passing involuntarily and frequently; complained of much pain when her lower limbs were handled or moved; apparently, complete paraplegia; all the extensors of the upper extremities paralyzed; wrist-drop, both sides; slight power in flexors of fingers; no knee-jerk.

On account of her condition tests of sensation unreliable; slight pressure on the muscles, especially of the calves, caused much complaint, and would quickly arouse her from deep sleep; condition remained about the same for ten days, then temperature fell; she took nourishment freely, mind brighter but bad memory, especially for recent occurrences, and occasional delusions. After improvement, found impairment or loss of temperature and tactile sensibility from the toes to waist line, and impairment of the same to less extent in hands and forearms; a rapid atrophy of the muscles of the lower extremities, less of the upper; did not not gain full control of the sphincters for some weeks.

History: About two weeks before the date at which I first saw her, she had gone to a wedding on a very cold day, remaining all the afternoon and most of the night. Going and returning and all the evening she was very chilly, could not get warm. The following morning when she awoke, found herself strangely helpless in trying to turn over in bed. On attempting to get onto her feet, she was barely able to stand. From that time there was a steady increase of the numbness and paralysis. The patient and her husband denied that she used much alcohol. The attending physician had told me on our way to visit her that she did. A relative afterwards confirmed this statement. The patient finally admitted that she drank beer and whisky all the time. A note made March 25 shows that there was then evidence of rapid improvement, which was uninterrupted until she was well. Note of the time when she began to walk again is lost. A note made Feb. 15, some five weeks after first visit, shows that there was at that time a reaction of degeneration (of greater or less extent) of most of the muscles of all extremities. The dorsal and palmar interossei of both hands reacted normally to the current. Her hands were very thin and flexible, on which account it was possible to demonstrate the action of these small muscles very perfectly, making an unusually interesting spectacle. I last saw the patient Aug. 15, 1888. She is perfectly well, so far as she can tell, in all respects. Only after a long walk or standing on her feet all day does she experience any uncomfotableness, and that in the way of a weak feeling in the ankles. Sensation is good. The knee-jerk is absent (or so nearly so that I could not get it by the ordinary methods of testing, with *reinforcements*). The treatment consisted of large doses of ergot and iodide of potassium at first, and later of *nux vomica*.

In this case alcohol was probably the predisposing cause and exposure to cold the exciting cause of the attack. In many cases alcohol probably acts as a predisposing cause only. The following case, like the above one, would seem to indicate this fact. The same may possibly also be said of case VI.

CASE II. I saw at the St. Louis City Hospital last winter. For the privilege of consulting the notes of it I am indebted to the superintendent, Dr. Dalton, and his assistant, Dr. Pierce. L. C. M., æt. 38, laborer, admitted Dec. 23, 1887, discharged March 31, 1888. No knee-jerk, complete paraplegia, very little power or motility in hands and arms; had to be fed, complained much of myalgic pain. Diagnosis of multiple neuritis was soon made. He improved rapidly, and when discharged was able to do general detail work about the hospital. History: When admitted he had just reached the city from the far West, where he had been "tramping" for the two past months, often sleeping out, and almost constantly exposed to winter weather. During these two months he had had very little to drink in the way of alcohol, but for the greater part of his life before, at least for several years, he had been a hard drinker.

The fact that he had recently used but little alcohol and had been exposed to cold, damp weather for so long a time suggest that the former was a predisposing and the latter the immediate cause, or at least that they were common causes.

CASE III. Andrew Smart, M. D., F. R. C. P. E., read the report of a case of multiple neuritis of combined syphilitic and alcoholic origin before the Medico-Chirurgical Society of Edinburgh, May 2, 1888,¹ the essentials of which are as follows: A widow, æt. 37. Four of her five children died in infancy, the survivor, a boy of ten, in delicate health. Had two miscarriages, suffered from menorrhagia during all her married life. Two months before her admission to the Royal Infirmary of Edinburgh, Nov. 1887, she be-

1. A Case of Multiple Neuritis of Combined Syphilitic and Alcoholic Origin; Treatment by Electro-Massage; Complete Recovery. By Andrew Smart, M.D., F.R.C.P.E. Read before the Medico-Chirurgical Society of Edinburgh, May 2, '88.—Edinburgh Medical Journal, July, 1888.

gan to experience a difficulty in walking and feelings of cold and numbness, and pricking and tingling sensations in the feet and legs, and later, actual pains and much distress. Just before admission the same pains were coming in her hands. When admitted she could not walk or stand, attempts to put her on her feet causing her much pain. Her decubitus was on the right side, with the knees drawn up, feet rigidly extended, toes drawn under; attempts at voluntary motion caused her pain; even slight attempts at passive movements caused much myalgic pain, especially in the calves of the legs; sensibility not accurately ascertained on account of excitable condition of patient; knee jerk and ankle-jerk abolished; sphincters not impaired. Electric tests elicited a feeble reaction of degeneration. Marked defect of memory and emotional depression; no delusions or hallucinations. Later she had wrist-drop, and the tactile sensibility of the hands was found defective. The history of a drinking habit was immediately ascertained, and all stimulants were withdrawn. But the patient had been under treatment for some little time before the signs and a history of syphilis were discovered. The adoption of antisiphilitic medication was successful beyond expectation, the improvement being prompt and rapidly progressive until the patient was well.

The probabilities are, as claimed by the reporter, that syphilis and alcohol were both factors in the causation of the neuritis in this case.

Unquestionably alcohol is a frequent cause of peripheral neuritis. Is alcoholic neuritis pathologically different from other neuritides? Are there any reasons, from a pathological standpoint, why we may not assume that alcohol becomes a common factor with other agents in the causation of a neuritis? Bramwell has recently said: "Whether the neuritis produced by alcohol presents any pathological (microscopical) characteristics by which it can be distinguished from the peripheral neuritis which occurs in locomotor ataxia, phthisis, diphtheria, diabetes mellitus, and from the multiple peripheral neuritis, which (since we know not its exact cause), is termed idiopathic, has yet to be determined. It may, however, be broadly stated that in all these conditions the lesion resembles more or less

closely the degenerative changes which Ranvier and others have described in the peripheral ends of divided nerves."

During the first ten days that case I. was under my observation there was a considerable elevation of temperature, often 102° and 103° F. She had also had fever for several days at least before I saw her. An interrogation of all the organs did not afford an explanation of it. While there was evidence of a drinking habit, there was none of a recent debauch; neither had alcohol been suddenly withdrawn, but was continued in small quantities. There was no evidence that the fever had its origin in any known infectious cause. The cerebral symptoms, persisting as they did, suggested the probability of trouble in that direction. The distribution and onset of the paralysis left room for only two possible explanations, either a peripheral neuritis or an acute poliomyelitis. The absence of any satisfactory information in response to various tests of sensibility, the persistence and completeness of the sphincter-paralysis, suggesting central disease, made a diagnosis of neuritis not altogether satisfactory. The fever finally departed quite abruptly, and, although considerable amnesia and occasional hallucinations remained, the stupor immediately disappeared, and her mind was comparatively clear, so that a more complete history and a more satisfactory examination could be obtained.

No doubt the presence, or at least the extent of neuritis in alcoholic cases has often not been recognized on account of complications that either mislead the observer or interfere with a satisfactory examination. The following case, more forcibly than case I, reminds us of the truthfulness of this observation. Many of us have seen similar ones, especially in the charitable hospitals of a large city. The history of the case and microscopical specimens of the post-mortem examination were presented by Mr. Sharkey at a recent meeting of the Pathological Society of London.¹

CASE IV. A woman, age not given, under observation from

1 Alcoholic Paralysis of the Phrenic, Pneumogastric and Other Nerves; Specimen presented to the pathological society of London, April 17, 1888. By Seymour J. Sharkey.—British Medical Journal, April 21, 1888.

August 27 to September 25, 1887. Had been a hard drinker, principally of whisky and beer. She had been losing flesh and strength, and was very weak in her legs. She had also complained of numbness and cramps. On admission she could understand well enough what was said to her, but was incoherent in her replies. Respiratory sounds harsh, but no evidence of pulmonary disease; liver enlarged and hard; no albumin in the urine; legs wasted, especially on front of tibiæ; she could neither walk nor stand. The legs were tender, both superficially and on deep pressure; temperature normal; tremors of the tongue and lips. A few days later she had a rigor; her temperature went up to 102.8°F. On September 13, she had two severe attacks of dyspnea, and it was then noticed for the first time that the diaphragm was completely paralyzed. There was also a difficulty in swallowing. Respiration 40 per minute. On the morning of the 15th she began to spit blood. The average pulse rate was 140. On the 23rd the apices of the lungs showed signs of breaking down. On the 25th she died in a sudden access of dyspnea. On post-mortem examination there was found tuberculosis of the apices, cirrhosis of the liver, the kidneys normal, the spinal and cerebral membranes healthy, the brain normal throughout; in the dorsal and lower cervical regions of the cord there was softening, which seemed to be pathological and not post-mortem. The microscope revealed slight general inflammatory vascular changes throughout the whole central nervous system, though the changes were trivial except in the lumbar enlargement.

"The brunt of the disease had evidently fallen on the peripheral nerves, inflammatory changes being intense in the phrenic, pneumogastric and popliteal nerves. There were also inflammatory changes in the muscles supplied by the nerves."

The immediate cause of death in this case was the disease of the pneumogastric and phrenic nerves. Without the thorough microscopical examination that was made, it would have been impossible to positively establish this fact. In the absence of such an examination in similar cases, the cause of death, no doubt, has been assigned to cerebral trouble not infrequently.

Much stress has been placed on the sensory symptoms as an aid to diagnosis; but, besides the fact of the difficulty that there is at times in making satisfactory tests, it must not be forgotten

that there is also in some cases a singular absence of sensory disturbance, or at least only a slight interruption of the normal sensibility. Bramwell reports a case of the kind:

CASE V.¹ The symptoms, history and progress all show it to have been a case of alcoholic paralysis, in which the knee-jerk was entirely absent, the muscles of the lower extremities much atrophied, and so powerless that the patient could not walk. Yet there was no myalgic pain, nor in fact pain of any description during the whole attack. The patient complained of some numbness in the lower extremities, but she localized impressions perfectly. There was very slight evidence of any affection of the cutaneous sensibility until the period of convalescence, when marked hyperesthesia of the skin of the lower extremities was developed.

The fact must also be borne in mind that occasionally in acute cases of anterior poliomyelitis there are, especially in the incipience of the disease, sensory disturbances.

The knee-jerk is almost invariably abolished. The following case presents an exception to the rule in this respect, and other interesting features. It is reported by Dr. Chas. Starkel, of Belleville, Ill. I had the privilege of seeing the patient several times and of examining him carefully.

CASE VI.² G—, æt. 23, a physician, first noticed in 1885 peculiar sensations in his feet and legs. Two months later he first noticed a loss of muscular power in these extremities. Since October, 1886, he had been practically confined to the house, with the increasing paralysis. When he came to Dr. Starkel, a few days before I first examined him, he thought he had locomotor ataxia and had lost all hopes of recovery. The notes of our first examination in March, 1887, are briefly as follows: Muscles of legs and thighs much atrophied and flabby; feet always cold; voluntary and pas-

1 A Case of Alcoholic Paralysis, in which Myalgic Pain and Tenderness were Absent, and in which there was very little Disturbance of Cutaneous (Tactile) Sensibility By Byron Bramwell, M.D., F.R.S.E., F.R.C.P., Edinburg.—*American Journal Medical Sciences*, June, 1888.

2 A Case of Alcoholic Paralysis. By Dr. Chas. Starkel, Belleville, Ill.—*St. Louis Courier of Medicine*, Aug., 1887.

sive movements of lower extremities cause much pain; sensibility (of the skin) much impaired as determined by tactile, temperature and faradic tests. A very strong faradic current was not complained of from the toes until more than half way up the thighs; reaction of degeneration; pressure on muscles of lower extremities, especially the calves, caused excruciating pain, compelling him to cry out. The *knee-jerk* was *much exaggerated* and was only produced at the expense of great pain to the patient. Locomotion was only possible by grasping firm articles of furniture about the room, or with the aid of attendants, and was accompanied with much pain. From pain, loss of sleep and worry he was much reduced; he was vomiting every morning and had little appetite.

He had been much exposed to cold, wet weather during the three years previous to the time we first saw him. Twice within that time he had slept, when fatigued, in wet clothes. He was conscious of sustaining no immediate untoward consequences, and he was not intoxicated on either occasion. He had almost constantly drank whisky in considerable quantities, from an early age. For the past few months he had only used it in limited quantities.

A note made in June, four months after first examination, shows that there had been remarkable improvement. The muscles were gaining rapidly in size and becoming hard. Sensation was almost normal again except in the feet. The patient was taking comparatively long walks with comfort, and feeling quite well in all respects.

The treatment consisted in the withdrawal of all alcohol, ergot in dram and half dram doses for eleven weeks; mild galvanism and gentle massage, continued almost daily for three months; nuxvomica after the eleventh week.

Buzzard, Struempell and Moebius have reported cases of multiple neuritis in which the deep reflexes were exaggerated. The two latter authorities have offered an explanation of this unusual occurrence to the effect that the exaggeration is due to an irritation of the sensory portion of the reflex arc, *i. e.*, in the sensory nerves. Here is an exceedingly interesting fact. To explain it we need more information. In one case (V) there is little evidence of impairment of the sensory nerves of either muscle or skin, but an abolished knee-jerk; in another case (VI) indubita-

ble evidence of grave lesions of the nerves of both muscles and skin, yet an exaggerated knee-jerk.

In case I, there was an unusual involvement of the sphincters of the bladder and rectum. More than six weeks passed before she had good control of them; and for about two weeks they were completely paralyzed. Whether the nerves controlling them were included in the general neuritic process, or whether the sphincter-inability was due to general feebleness and muscular atony from fever, etc., can not, of course, be positively decided. But as we observed it, it impressed us as being a paralysis proper. The patient, while not able to control the sphincters, was always conscious enough to complain immediately of her soiled condition. Furthermore, the weakness of the sphincter continued after she was rapidly gaining in general strength.

I have not seen an involvement of the sphincters mentioned in any case thus far reported. On the contrary, many writers make an unqualified statement that they never are affected.

Unquestionably small quantities of alcohol are sufficient to protract and aggravate a neuritis of which it has been the exciting cause. Proof of this is the rapid improvement in all uncomplicated cases following its absolute withdrawal. Cases I and VI were neither of them taking much alcohol at the time they came under my observation; but it was, of course, promptly and entirely discontinued in both instances. I hardly think, however, that this fact alone explains the very rapid improvement, especially in case VI. Within a very few days the acute pain and general distress had almost disappeared and he was fast gaining strength. As stated above, ergot was given in large doses. The ether spray was used also but only to a very limited extent. A mild galvanic current was employed, which, by the way, had to be very mild not to cause muscular pain. On this account the quantity of electricity used was so exceedingly small, and the length of seance so short for the first few days that I am not disposed to allow it much credit in the curative process until later when it was borne in greater quantities. I have not seen ergot recommended in neuritis, but I believe that, aside from my limited experience with it, there are rational grounds for so using it, at least, until it has had a fair trial.

RECAPITULATION.

(1) Alcohol is probably a common factor with other agencies in the production of some cases of neuritis. (Cases I, II, and VI.)

(2) The sphincters are probably occasionally involved (case I).

(3) The deep *reflexes* are sometimes exaggerated (case VI, and others previously reported).

(4) In diagnosis, not infrequently, little aid is to be had from sensory symptoms, and too much reliance must not be placed on tests of sensibility (cases I, III, and V).

(5) In the presence of complications or of distracting symptoms, especially cerebral symptoms, the existence of extensive peripheral neuritis may be overlooked, and especially if it affect one or more of the cranial nerves, as for example, the pneumo-gastric (cases I and IV.)

(6) The onset may be very acute, the disease developing within a few hours with pyrexia, etc., or very slow, not reaching its acme for two years (cases I and VI).

(7) A trial of ergot in dram and half dram doses t. i. d. is recommended in the treatment of multiple neuritis.

THE RECENT OUTBREAK OF SMALL POX AT MOBERLY, MO.

—
BY JOSEPH GRINDON, M.D., ST. LOUIS, MO.

—
[Read before the *M.V.M.A.*, St. Louis, Sept. 27, 1888].

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IF it be true that History forms the surest guide to the art of government, it may with equal truth be said that the study of past epidemics or periods of prevalence of disease will furnish ample returns to the physician who seeks in it the arms wherewith to wage successful warfare against future attacks. And just at this trial, the review of an outbreak of small-pox in a town of this state, which is the subject of this paper, seems to be opportune, since the secretary of our State Board of

Health has given it as his opinion that we stand in danger of a visitation of that scourge during the coming winter, basing his prognostication on the fact that there have been during the year several outbreaks in this and adjoining states, some of them of considerable severity.

The town of Moberly, Randolph Co., Mo., is a pleasant, prosperous place of over ten thousand inhabitants, and may boast of an unusually high degree of healthfulness. It is situated on the western division of the Wabash R. R., which maintains large machine shops there, and presents many of the features of a railroad town, one of the most important of which, from the standpoint of the sanitarian, is a shifting population which may generally be reckoned a menace to the health of the remainder of the inhabitants. It was probably this feature which determined the occurrence of the epidemic.

Early in March last, there came to the town direct from Switzerland a poor emigrant. He was said to have been a pauper in his native country, but brought with him no less than fourteen chests and trunks filled mainly with second-hand clothes. What part these played as carriers of the infection it would not now be possible to determine. The fact is that five weeks after his arrival, and presumably two weeks or thereabout after the unpacking of a trunk containing the fomites of small-pox, his little daughter sickened with that disease. This was the first instance of the disease occurring in or about the town for several years.

This case was kept hidden, but a number of persons were admitted to the house for various reasons, nine of whom received the contagion at first hand. From these nine we found a "third generation" appearing as follows: four cases gave rise to one other apiece; one to two cases; one to three cases and another to eight, one of these eight cases gave rise to three, forming a part of the "fourth generation." Energetic and timely measures jugulated all these foci of infection, excepting one case belonging to the "third generation" which was kept successfully hidden until it had infected seven individuals more, who, with the three above mentioned, formed the "fourth generation." One of these seven was isolated before it could prove

a source of fresh harm, but from some or all of the remaining six, (all living on the same premises) there sprang a "fifth generation" of eight cases; seven of which were isolated in sufficient time, and the remaining one giving birth to a sixth and last "generation" consisting of a single case, which, being, discovered and promptly dealt with at its inception was the last one of the outbreak which thus terminated. Besides these cases, there was one of obscure origin which left a single descendant. These "generations" are represented in the accompanying chart by parallel columns.

It is only right to state that the theory of the introduction of the infection mentioned above is open to question, as the occurrence of the disease at various points in neighboring counties during the previous winter and early spring would suggest a domestic origin.

The table here given illustrates two points. First, the effect and importance of isolation. Thus, the seventh case in the

PROGRESS OF THE CONTAGION IN SMALL-POX OUTBREAK.

April.	April.	May.			
	"				
	" 17, 19.	May 3.			
		" "			
		" "			
		" 6.			
		" 7.			
		" 6, 7.	May 22.		
			" "		
		May 14.			
April.	" 2.				
" 17, 19.	" 4, 6.		May 20, 23.	June 1.	
" 19, 22.			" 23.	" 2.	
			" 26.	" 5.	
			" "	" 6.	
			" "	" 9, 9.	
			" 30.	" 10.	June 22.
			" 26.	" 11.	
				" 16.	
April, 21, 23.	May 5.				
" 22, 24.	" 6.				
	" 6.				
	" 7.				
Apl. 28, May 2	" 15.				
	" 16.				

second column remained concealed from the authorities until it had given rise to another which in turn infected others, so that we see seventeen cases, two of which were fatal, originat-

ing from that one. This was after the existence of the disease in the town was known. It goes without saying that if the first case had been isolated in time, the matter would have ended there, as the later cases could be traced back. This text preaches its own sermon.

The second point shown is in regard to the duration of the period of incubation. Where one date is given with a case it stands for the day of inception; when there are two dates, the second is the day of eruption. Reckoning from the date of eruption in the infecting patient to the date of inception in the infected, we have the *greatest possible duration* of incubation. In a large proportion, however, it was possible to define this period more exactly; thus it was:

CASES.	DAYS.
1	10
4	12
7	13
5	14
3	15
1	17

It was shown to be not over 17 days in one case, and not over 18 in another; while it was over 10 days in one, and over 13 in another case.

The general type of the epidemic was mild. Of the total of 48 cases (three of which occurred outside of the city limits) there died 3 or $6\frac{1}{4}$ per cent. Thirty-eight cases with two deaths came under my own observation. There was but one hemorrhagic case, and it ran a course so unlike what my experience with the disease led me to expect that I shall briefly report it here.

A. B., colored, female, aged 25, married, has four children, is now three months pregnant. Lives in yard from which were taken ten cases. Vaccinated five times unsuccessfully, the last time, May 29, by myself. Sickened, June 5 at 11 P. M. Eruption on the 7th at 6 A. M. I would call attention in passing to the well known fact exemplified here, that cases in which the period of incubation is less than 48 hours are apt to be severe.¹

1. Sydenham believed that the more time nature occupied in finishing the separation of the inflamed particles, the greater was the chance of ultimate safety to the patient.

The case, so far as the eruption was concerned, was distinctly of the confluent type, but on the day of maturation she spat some blood, which was repeated twice on succeeding days. On the 18th, four days after maturation, she was delivered of a three months' ovum intact. I expected she would flood to death and take on the appearance of typical variola hemorrhagica, as is the rule in such cases, but on the contrary she lost but little blood and lived for three days more. Her temperature which was at 40° on the day of delivery, dropped a little, and she died of exhaustion, having lain sick 16 days, a most remarkable struggle for life, when we remember that true cases of the hemorrhagic kind die about the fifth or sixth day.

In a former paper on this subject I refer to a peculiar form of ulceration of the cornea, described by Gregory, Marson and others, which will sometimes appear a few days after maturation. The ulcer is situated at a point on the limbus and gradually sweeps around. My former experience had been that it always resulted in sloughing of the entire cornea. Two cases, however, occurring among the group I now report, terminated favorably, one with some remaining opacity, and the other without. The treatment consisted in touching the ulcer two or three times with a 20 gr. solution of silver, instilling into the eye a 2 gr. solution of atropia, several times daily, blistering the temple and giving quinine internally, 5 grs. three times a day. It may be necessary to persist in this treatment for some days.

Speaking of complications, I would say that pleurisy is much less common here than in England, as set forth by writers of that country.

The relative showing of the white and black races was what one might have expected, in view of the known greater susceptibility of the latter.

	CASES	DEATHS	PER CENT.
White - - -	31	1	3.2.
Colored - - -	17	2	11.7.

In regard to the benefits of vaccination, the evidence was all one way. Thus, of the 38 observed by myself, 31 had never been vaccinated successfully, and among these occurred the only

two deaths. Five had one scar apiece, one had two faint scars, and one, strange to relate, had fifteen first-rate scars. These, however, were the result of a vaccination done 40 years before. Such an instance ranks alongside of recurrent variola.

The following case is of interest on account of its possible bearing on the question of the mitigating influence of vaccination done after infection. An intelligent boy of 14 years, previously unvaccinated, vaccinated himself from another boy's arm on May 12. He sickened on the 16th and broke out the 18th. I first saw him on the 28th. He had varioloid and a good vaccine scab, the pustules in the immediate vicinity of which, four or five in number, looked like what is called horn-pock or stone-pock, while the others—on the body—were still full of semi-fluid pus. The patient's sister who was unprotected had a confluent case. I realize that there is some difficulty here in harmonizing the facts, for it is the generally received opinion (I quote from Hardaway's "Essentials of Vaccination") that "if the cow-pox vesicles have not reached the stage of areola before the small-pox set in, no influence will be exerted on the course of the small-pox." Marson is very positive in fixing the limit of time during which vaccination will avail. He says, "suppose an unvaccinated person to inhale the germ of variola on Monday; if he be vaccinated as late as the following Wednesday, the vaccination will be in time to prevent small-pox being developed; if it be put off until Thursday, the small-pox will appear, but will be modified; if vaccination be put off until Friday, it will be of no use; it will not have had time to reach the stage of areola, the index of safety, before the illness of small-pox begins." Now this boy sickened on the fifth day after vaccination, or three days before the time at which we look for the areola. This phenomenon is sometimes retarded, (rarely when humanized virus is used, as in this case) but never, so far as I know, accelerated. I will not attempt an explanation, but merely record the observation. The two diseases, vaccinia and variola, progressed side by side, as Dr. Seaton says they will sometimes do.

Another case was as follows: A boy, 13 years; was exposed to the infection on May 6. Eight days later, on the 14th, he was vaccinated for the first time. It showed signs of taking,

but on the 20th he sickened, and on the 23rd broke out with very light modified small-pox. Meanwhile the vaccine continued to progress. The whole family was exposed at the same time. Two sisters and the only parent being well vaccinated, escaped. Of four others unvaccinated, two had discrete small-pox, and two confluent, of which one died.

Another boy of 10 years, a cousin of the last, was exposed on May 27, and on the 29th was vaccinated for the first time with fair success. On June 9 after 13 days incubation he developed a mild varioloid without prodromata.

Collating these 38 cases with a series of 517 in which a record of vaccination was kept, occurring in this city and reported by myself some years since, we have the following table.

	CASES.	DEATHS.	PER CENT.
Never vaccinated - -	314	146	46.5
Vac. over 15 yrs. ago -	123	29	23.5
Vac. bet. 10 and 15 yrs. ago	23	6	26.
Vac. bet. 5 and 10 yrs. ago	27	5	18.5
Vac. within 5 years - -	68	11	16.

Total - - - -	555	197	35.7
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Treatment. In a paper read before the Medico-Chirurgical Society of this city and published in the ST. LOUIS COURIER OF MEDICINE, April 1885, I gave the results I had obtained with the hydrochlorate of pilocarpine in small-pox. As those familiar with this disease know, it is generally possible to prognosticate within the first three days of the eruption what the final issue will be. As Dr. Gregory says "The peculiarly steady course of exanthematous fever enables us to predict the result, or as we commonly say, to prognosticate in eruptive fevers, with a certainty which it is not permitted us to do in any other tribe of diseases. Even the nurses at the Small-pox Hospital are rarely deceived."

Without going into unnecessary amplification, we will merely say that the gravity of the case increases as the pustules depart from the normal as to fulness, nature of contents, color of areola, etc. For practical purposes we may consider that no new pustules will appear after the third day of eruption. With the hope

then of favorably modifying the eruption as to character without adding to it numerically, I used the drug above mentioned, hypodermatically in doses of one-fifth grain to the adult, giving no more than a single dose to any one case, and that after the termination of the third day. The results were most satisfactory. Many a case that looked at first most forbidding took on a promising aspect after this measure, and went on to a happy termination. Hemorrhagic cases, however, were not helped or were even made worse, if possible.

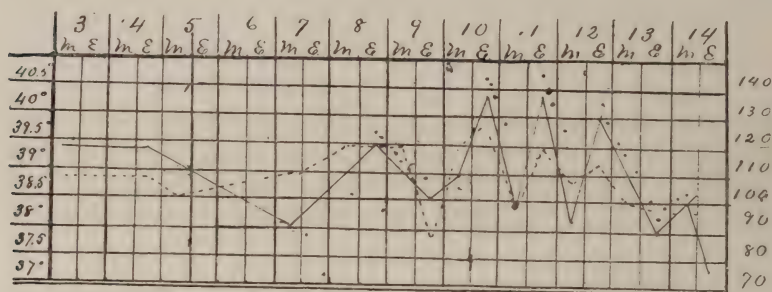
I now only have to add that I made use of the method in several cases of this last group with a continuation of the same fortunate results.

Insufflation of a powder composed of morphine, iodoform and starch gave great relief in the painful ulceration of the larynx which is so dangerous a symptom.

Time would fail me to go more fully into the matter of treatment beyond a few words as to what has given me the best results in the secondary fever. In former years I tried the antipyretics then in vogue, such as quinine, the salicylates, etc., and found them useless. Sodium sulpho-carbolate and hyposulphite were not much better, and had a tendency to precipitate a dangerous diarrhea, especially the salt last named. Even when combined with opium, the drugs were not free from that objection, and besides required to be given in such massive doses that the amount of opium exhibited as a corrigent became an important factor, fever patients not tolerating large doses of this drug which besides tends to increase the production of animal heat. The cold bath and pack were the best means then at our disposal, and always brought the fever down at first, but within four hours usually it would return to its former level, and often this method would later in the case fail utterly. It must of necessity ever remain a valuable adjunct to treatment, but is open to many objections, and most laborious of execution.

For these reasons I hailed an opportunity of testing one of the new antipyretics, and following the lead of Eugene Foster, of Augusta, Ga., found antipyrin to answer admirably. The case of which the temperature and pulse tracings are here given was of the most severe type of confluent. Each dot along the

tracing represents a dose of antipyrin, 15 grs. with tr. digitalis 5 m. The days are numbered from the day of eruption.



I need not multiply examples, as the case given may serve for a type of the rest. We have at last found in antipyrin something that will control the secondary fever of small pox,

A DEMONSTRATION OF THE EFFECT OF COLD APPLIED TO THE ABDOMEN UPON THE CIRCULATION IN THE TRACHEA. WITH REMARKS UPON THE USE OF COLD IN ACUTE INFLAMMATION.

BY WM. TOWNSEND PORTER, M. D., *Professor of Physiology and Lecturer on Diseases of the Throat in the St. Louis Medical College.*

[Given before the Mississippi Valley Medical Association, Sept., 26, 1888.]

NOT many years ago, gentlemen, an interesting and instructive experiment was done by Winternitz. Winternitz applied a sphygmograph to the radial artery of a healthy man, and took a normal pulse-curve. He then wrapped the arm in cloths saturated with ice-water, and took a second tracing. The difference between the two is very marked.

In the first, the line of ascent is almost vertical, indicating that the artery was quickly distended by the pulse-wave; and the apex is sharp, showing that the stretched vessel tended to

return promptly to its original size. The second curve, taken after the application of cold to the arm, is scarcely a third the height of the first. Its labored ascent is a sign of slow expansion, and its rounded apex of a tardy recoil.¹ The first curve



Tracings from the radial artery at the wrist: *A* before, and *B* after the application of a cloth dipped in cold water around the arm. From Brunton, after Winternitz.

tells of moderate lateral pressure (arterial tension) on walls whose extensibility and elasticity are those of the average healthy artery; the second, the force of cardiac systole being the same, shows that the artery was already full and tense at the beginning of the ventricular contraction, and that it opposed to further distention a resistance which much diminished the amplitude of the curve.

The heart's action remaining unchanged, the explanation of this difference in the calibre and extensibility of the radial artery is to be found either (1) in stiffening of its walls by disease, or (2) in a contraction of the smooth arterial muscle. The former hypothesis is out of the question, for the first pulse-curve is normal. We are obliged, then, to accept the latter, and to account for the difference in the tracings by a constriction of the artery.

The cold which caused this narrowing of the arterial tube was applied to the skin at some distance from the vessel in question. Its action, therefore, was reflex, the afferent impulse being carried from the skin to the vaso-motor centre, and returning, as an efferent impulse, through the vaso-motor nerves to the arterial muscle.

¹ The tracing closely resembles curves that I have taken from arteries rigid from chronic endarteritis.

By this experiment Winternitz demonstrated that cold applied to the skin causes reflex arterial constriction.

From these pulse curves we may learn how cold allays the pain of acute inflammation. When a part, for example a finger, is attacked by an acute inflammatory process, there occurs what used to be called "a determination of blood to the part," *i. e.*, its vessels become dilated and gorged with blood. These distended vessels press upon sensory nerves¹, made hypersensitive by the irritation that has caused the inflammation and by depreciation in the quality of their blood supply. Where inflamed tissue is bound down by a strong membrane, *e. g.*, the periosteum, there is little room for expanded vessels or inflammatory exudate, the nerves are squeezed harder, and the pain becomes excruciating. It is distinctly aggravated as each ventricular systole forces an additional quantity of blood into the already full arterial system, and momentarily increases the pressure upon the nerves.

We cannot, therefore, be surprised that a position of the inflamed part which favors its congestion (vascular swelling) should increase the pain, and it is easy to see why a "felon" becomes less painful when the finger is held above the head, and the vessels are somewhat depleted by gravity.

Cold contracts the arterioles supplying the inflamed part, lessens the vascular distention, and relieves the nerves of the pressure that they are registering in the cerebrum as pain.²

It is interesting in this connection to remember that heat also allays the pain of inflammation. Hot applications dilate the small arteries in the vascular fields about the inflamed part. The dilation of any artery, whose endothelium is normal, is fol-

1 It must be understood that only part of the tension, on which the pain of acute inflammation is so largely dependent, is due to congestion. The inflammatory exudation is the chief cause of tension. Narrowing of the vessels leading to the inflamed part lessens exudation by lessening the supply of blood, and, moreover, lightens the task of the efferent lymphatics, and makes it possible for them to diminish the swelling by carrying away the exudation.

2 *Extreme* cold has also a local anesthetic action. The effects of moderate cold (therapeutic cold) are alone considered here.

lowed by increased flow through the artery itself, and by diminished flow through the other arteries. Thus the effect of hot applications is to diminish the amount of blood in the area of inflammation by augmenting the flow through surrounding areas, and we have already seen how diminution of blood supply lessens pain.

The effect of cold in acute inflammation is by no means limited to the relief of pain. I need not remind this audience of the pathology of acute inflammation. The arteries dilate; the blood-stream quickens and then slows; white corpuscles arrange themselves along the sides of the veins, where the current is feeblest, and begin to block the capillaries; the flow becomes more and more sluggish, the fast-increasing number of corpuscles fill the vessels in dense masses and obstruct the stream; plasma and leucocytes pass through the walls of veins and capillaries; the almost solid mass within sways to and fro with the shock of the pulse wave, and finally is still; stasis is present; the escape of corpuscles, both white and red, becomes general; thrombosis is not far distant, and the destructive-constructive process of inflammation is in full play.

These changes may be arrested up to the point of active corpuscular diapedesis. How this may sometimes be done, and what precautions should be taken in the doing, will be seen from the experiment that shall now be shown you.

You see here four cats, bound upon their backs. The trachea of each cat has been opened with a galvano-cautery knife, and the lips of the wound held widely apart by weighted hooks that were passed red-hot through the tracheal walls. These precautions prevented bleeding. This method, which is that of Rossbach,¹ exposes a surface of tracheal mucous membrane 2—4 cm. (.8—1.6 in.) long, and 1—2 cm. (.4—.8 in.) wide, according to the size of the animal.

Upon the abdomen of each cat rests a large, hot, flaxseed poultice. This hot application to the abdomen has caused, re-

¹ Ueber die Schleimbildung und die Behandlung der Schleimhauterkrankungen in den Luftwegen. Festschrift der Julius-Maximilians-Universität, Würzburg. Leipzig, 1882, band I; s. 98.

flexly, a dilatation of the vessels in the tracheal mucous membrane. The mucous membrane is much redder than it was previous to laying on the poultices. Many vessels are seen where none were visible before. When I replace the hot poultices by iced cloths you will notice a sudden blanching of the membrane. In less than half a minute it will be everywhere deadly pale. But the vascular spasm which causes this sudden anemia is not permanent. After one to two minutes it gives place to a gradual vascular dilatation. The normal hue returns first, white above the cartilages, pale rose-red in the intervals; soon the color becomes rose-red above the cartilages themselves, then everywhere bluish-red, the color of venous congestion, the color that shows the blood tarrying in the part until almost all its oxygen has been taken from it by the tissues.

We are taught much by this experiment. We learn that cold makes powerfully for good in the first stages of acute inflammation, diminishing the congestion, stopping a supply of fuel on the way to the fire. We learn further, and most impressively, that cold, injudiciously used, makes just as strongly for evil; that cold applied too long causes venous stasis, the condition most favorable to the progress of the inflammation, most helpful to those morbid changes in the endothelium that disturb the "vital equilibrium which exists between the intra-vascular blood and the extra-vascular tissue,"¹ and which, according to the Listerian school, constitute the essential lesion of inflammation. Acute temporary congestion, continued congestion, edema, copious extravasation, even complete necrosis, have been produced by Cohnheim in a rabbit's ear by various degrees of cold.

We cannot too clearly recognize the danger. The therapeutic use of cold came to us from Germany. In too many instances we have used it with American enthusiasm, and without German caution.

Nowhere has cold been more carelessly employed than in diseases of the upper part of the respiratory tract. Nowhere does congestion play a more important part in the causation of acute

¹Michael Foster, *Text-book of Physiology*, 3rd Am. ed., p. 287.

inflammatory disease than in the pharynx, larynx and trachea. Here, therefore, we should be especially careful in our manner of using cold.

Unintelligent persons had better not be trusted with this two-edged sword. The duration of each cold application should be short. The applications should be frequently repeated.

2614 Locust street.

FACIAL PARALYSIS DUE TO INFLAMMATION OF THE MIDDLE EAR.

BY CHARLES A. TODD, M.D., *Prof. Diseases of the Ear and Throat,
Missouri Medical College, St. Louis.*

IT is difficult to conceive of a region in the body in intimate relation to so many vital structures as is the middle ear, or tympanic cavity. This particular place seems to constitute a sort of vital knot, a point at which we find congregated a number of parts whose disease is very serious matter; yet the middle ear is specially liable to pathological change, since its cavity is continuous through the Eustachian tube with the upper respiratory tract, a region very commonly diseased. The relation of the facial nerve to the tympanum is such as to include it among the structures liable to be implicated in its disorders. It will be remembered that the facial nerve enters with the auditory the internal auditory meatus, and at its termination follows the aqueduct of Fallopius to the base of the skull. This bony canal passes across the tympanum making a distinct projection upon its inner wall. Sometimes the canal here is imperfect, there being a hiatus in its wall closed by the lining membrane of the tympanum itself. It may be readily understood from these peculiarities that the facial nerve is apt to become involved in middle ear inflammation, even if it be acute and only temporary; much more if the disease has had sufficient time and intensity to attack the thin bony shell, or to destroy a membranous substitute for such protection. As the nerve quite fills the canal, an effusion into it must compress its fibres and at once

produce paralysis of the muscles of the face to a greater or less degree. This condition is observed when after exposure to cold, an earache is promptly followed by facial paralysis of the same side as the affected ear; the careless physician will call it rheumatic paralysis and treat it accordingly. With the subsidence of the otitis the effusion into the facial canal disappears, or the swelling of the nerve sheath passes away, and the peripheral lesion with it: this is a natural and spontaneous result in light cases. When the otitis is long continued or aggravated by systemic vice, then there may occur such extensive mischief as completely to destroy the integrity of the facialis in its tympanic section; in the last stages of phthisis a chronic otorrhea is liable to give rise to this complication; two specimens in my possession exhibit this destruction and removal of the outer wall of the facial canal in the tympanum, the nerve being indistinguishable in a purulent debris. Of course, in such doomed cases nothing is to be expected in the way of restoration, but it is not impossible that the local destruction, partial or even complete, due to processes not inconsistent with return of the general health, we may have in nerve tissue reformed and the nervous connections reestablished. It is well known that not only do divided nerves quickly reunite, but a considerable loss in continuity may be made good; this the surgeon often learns to his cost after extracting part of a nerve to relieve neuralgia.

We have no right, then, to despair in a case of facial paralysis due to otitis, even if the aural lesion is extensive and loss of nerve action complete and persistent for a time. A patient has recently consulted me who exhibits to an exquisite degree of perfection, the typical symptoms of severe primary otitis media suppurativa with complete facial paralysis of the same side.

April 23. Mrs. R., aged 35 years, of robust general appearance, came to me with the following history: Nov. 11, 1887, Mrs. R., had been riding in a cold wind and in the evening suffered from earache in the right ear (she had been subject to rheumatic attacks, the house being damp and in a low region of country). The pain persisted until Jan. 21, 1888, when it suddenly stopped after a severe paroxysm; pain has been present off and on since that date, but not continuously nor as severe.

Nov. 28, the ear was first noticed to discharge, sometimes the flow was bloody. When the pain ceased Jan. 21, the face was seen to be "all drawn over" to the left side, paralysis had supervened. From the outset of the otitis vertigo had been present, and constant tinnitus set in shortly after. She kept her bed during the early part of the attack, and when she began to get about the house again, the vertigo gave much trouble; latterly she was liable to fall down after moderate exertion in her household affairs; her gait was very unsteady. The tinnitus was distressing, the noise being "like a train of cars."

Her condition at the time of examination April 23, is set forth in the above account. Her gait is so tottering and uncertain that she requires a companion to support her. There is total loss of power over the muscles on the right side of the face; the right side of the soft palate is immobile; the sense of taste along the right side of the tip of the tongue, is difficult. There is a purulent discharge from the ear, no pain, no swelling about the ear. A small soft polyp covers the upper part of the tympanic membrane. H.D. R. watch, heard only when pressed hard upon the mastoid; H. D.L. three inches. The appetite is poor and capricious; sleeps poorly, has bad dreams and is restless. She is habitually constipated. On application of a weak galvanic current slowly interrupted, a slight muscular action is excited. In the treatment the usual procedure has been adopted. The ear is daily cleansed and iodoform insufflated; counter-irritation behind the ear, diluted croton oil followed by tincture of iodine; the interrupted galvanic current; careful hygienic measures as to diet, quiet, etc.

To-day, May 1, all the symptoms seem improved, notwithstanding the sudden unfavorable change in the weather, so unsuitable for a rheumatic tendency, she even contracts some of the facial muscles, notably the corrugator supercilii. I have refrained from all operative measures upon the ear, preferring to wait until the general condition is more satisfactory.

In a case where the symptoms of extensive deep aural lesions are so marked, no definite prognosis can be made, either as to degree of restoration of hearing, if any at all, or as to the future

muscular control. The case is given as peculiarly illustrative of the disease under discussion. It is probable that the facial nerve is either infiltrated with exudation in its tympanic section, or actually involved in the aural suppuration. That the lesion is extensive is demonstrated by the palatal paralysis. The loss of taste is a usual phenomenon, and seems attributable to the loss of function in the chorda tympani nerve, a branch from the facialis.

Some physiologists hold that this nerve, which joins the gustatory, is the true nerve of taste, while the gustatory itself like the other non-motor branches of the great tri-facial, has only general sensation.

In another case under my charge the facial paralysis is clearly due to necrosis in the tympanum, there being a chronic middle ear suppuration after typhoid fever; the naked bone can readily be felt amidst abundant granulations. This patient has been some time under treatment, as the removal of the dead bone must be left to nature. The excessively hard petrous bone yields slowly to disintegration; all attempts at hastening the process by application of acids have proven useless, and he would be indeed a reckless surgeon who should introduce his gouges and rasps into this region. The facial muscles must be constantly exercised by electricity to prevent atrophy, while the ear receives the proper treatment to keep down the local inflammation.

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AN ITALIAN PEDIATRIC ASSOCIATION has just been organized.

CASES FROM PRACTICE.

CASE OF DISLOCATIONS AND FRACTURE REDUCED UPON THE TWELFTH DAY AFTER INJURY.

BY CHEVES BEVILL. WINFIELD, ARK.

On Aug. 30, last Mrs. P. fell from a ladder about four feet backward, and received quite a variety of injuries of her arms.

I was called, but being twenty-five miles away from my office, an eclectic physician was sent for, and in justice to him I will say that, owing to the length of time from the injury until he arrived (some six hours) he could not tell as well about the nature of the case as one would like to.

On the eleventh day after the fall the husband requested me to go to see his wife, saying that he "believed that her right elbow was out of place." As it was late in the day, I told him that I would bring another physician down with me next day, as I knew very well that I would have to use an anesthetic, and so informed him.

At ten o'clock upon the twelfth day from the time of the injuries I saw the lady. She was pale and weak from loss of sleep, though cheerful.

I found the right elbow dislocated, the humerus forward upon the forearm. Of course the arm was nearly straight, but semi-prone. The surface around the elbow was green, owing to the bruised condition of the flesh, and was very tender; the right ulna was fractured just about one inch from lower extremity; the radius had been dislocated laterally and the husband had immediately after the fall reduced it, as he thought, but had only about half completed the operation: hence this was an awkward shape for the hand and arm to be in. There were some splints upon the lower arm, but the ulna was not properly readjusted, so it had failed to unite. The left ulna, instead of being fractured, was

disarticulated from the carpus and thrown backward, and the radius here had also been dislocated backward, and was not properly in place.

I tried to reduce the elbow luxation, but could not, as by pulling upon the forearm I hurt the part over the fractured ulna too much. So I prepared everything as best I could to use ether. My assistant in the work, Dr. T. W. Dedmon, administered the ether, but I took good care to watch the eye, as I had seen the physician do at divers operations but a short while before in St. Louis.

Forty minutes failed to secure anesthesia with the ether, so I gave chloroform, and she was soon thoroughly under its influence, and now by a great effort, using my knee as a fulcrum, I was gratified to find that the elbow was reduced; but it made my patient flinch, as it had become somewhat accustomed to its new place.

The radius was then properly reduced at the wrist, which brought the fractured ulna properly together. This was done up a little more according to modern surgery than it was before. The left wrist gave me some trouble to get it properly reduced, as the cartilages seemed to have glued the parts to their new places.

After an hour's work I completed the work, and the patient came from under the chloroform all right, and was happy to find herself all together once more.

The pain at the elbow became very severe, so I gave morphia sulph. gr. $\frac{1}{4}$, which gave her some ease. I directed cold water to the joints. She is now, Oct. 5, all right, and glad to find that she can use her arms and hand very well, considering the length of time since set.

I report this case owing to the novelty of the case, and to show that by the use of chloroform, even at this late date, we can reduce dislocations, and properly set fractured bones, and render our patient fit to attend to business again. Erichsen, in the last edition of his "Science and Art of Surgery," says that "we ought not to try to reduce the elbow joint later than one month after it is dislocated, and under an anesthetic."

AN INFANT'S TONGUE can often be exposed to view by simply pressing the cheeks gently with the thumb and finger, or, if necessary, hold the nose for a moment and the tongue will come in sight. Dr. Parvin suggests this.

EDITORIAL.

UREMIA.

Dr. William Carter, in the Bradshawe Lecture for 1888 (*Brit. Med. Jour.* Sept. 1), gives a most valuable study of this subject from a clinical standpoint, reciting at the same time the experimental observations of others.

He defines uremia as "the altered condition of health caused by the accumulation within the body of poisonous products that should be eliminated by the kidneys." He notes the greatly varied symptoms of this condition in different patients. "Thus after apparently similar degrees of suppression or diminution of urine, some patients have only violent and persistent vomiting, the brain remaining clear; others have this with diarrhea superadded, and others again become comatose. Some are convulsed, others delirious, others asthmatic," etc.

Noting the different explanations that have been offered, he considers first, as being the first serious attempt to comprehend all the facts under one theory, that of Traube who held that the nervous symptoms were due to cerebral anemia, and never occurred without preceding cardiac hypertrophy and blood dilution. According to this view heightened blood pressure caused cerebral edema, which in its turn caused cerebral anemia, and as this affected one or other portion of the brain, there would be a preponderance of either coma or convulsions, these last being limited, if the anemia was limited, general if it were general." As Dr. Carter remarks, however, this theory was too exclusive, and he cites two cases illustrating the fact that uremia may occur without any evidence of cerebral anemia and without any cardiac change.

He recounts also some experiments of M. Raymond upon rabbits which would seem to show that possibly local vascular spasm or dilatation from vasomotor influences may perhaps be the cause of the nervous convulsive or paretic disturbances occurring so frequently in cases of Bright's disease.

Dr. Carter also relates some histories showing the fallacy of the supposed utility of dropsy in cases of Bright's disease and of the supposition of special danger of precipitating uremic convulsions, etc., by any rapid reabsorption of the presumed toxic dropsical fluid. In one case occurring in his own practice he was convinced that the convulsions which occurred were due not to the absorption of poisonous fluid from the tissues, but to the induction of great arterial dilatation and excitement and increased bodily temperature by the means used to cause the reduction of the dropsy, viz., a hot air bath. Since taking the precaution to have the pulse and temperature carefully watched when making use of the hot air bath, and stopping at once if either rises much or if headache occurs before perspiration is induced, and to have the surface sponged with tepid water or with water and vinegar before reemploying it, he has had no such complications.

As regards the composition of the effused fluid, he states that they in facts contain a very small amount of urea or salts.

One fact to which he calls attention is the progressively diminished alkalinity or even actual acidity at last of the blood in some of these cases.

Experimental researches of MM. Feltz and Ritter, mentioned by Dr. Carter, go to show that the only really toxic constituents in the urines of health were the potassium salts, and that these, therefore, by accumulating in the blood or fixing themselves in excess upon the anatomical elements, are almost always the true agents of intoxication.

He mentions also the theory so ably advocated by Frerichs and disproved by Claude-Bernard that the uremia was due not to urea in the blood, but to its decomposition and formation of carbonate of ammonia.

The author reaches the conclusion which must commend itself to all, that probably uremia has many causes, and that each of the theories which have been advanced may have a measure of truth and may apply to some cases.

Dr. Carter thus summarizes the results of the experimentation in regard to uremia, as set forth in Bouchard's "Auto intoxication in Disease". "The urine as a whole is poisonous. The sources of its toxicity are fourfold, namely, (1) aliments, and more especially, their potassium compounds; (2) the absorbed products of intestinal putrefaction; (3) secretions, such as bile, saliva, etc.; and (4) tissue disintegrations." Bouchard determined the presence in varied proportions and combinations of seven different toxic substances; two convulsivant, one diuretic, one narcotic, one sialagogue, one pupil contracting, and one temperature reducing.

He calls attention to the attempts now being made to detect and study the various animal alkaloids, and suggests that the symptoms of some forms of uremia may possibly be due to the presence of xantho-creatinine.

In this direction, he thinks will probably be found the cause of the distressing dyspnea which occurs in some cases of Bright's disease.

As regards treatment Dr. Carter says it must be admitted that research has largely served in this as in many other departments, but to emphasize and confirm the value of practice already established.

Further than this it has pointed out early symptoms, the importance of recognizing which cannot be overestimated; and has made apparent the necessity of determining by frequent examinations the relation between body weight and the amount of urinary constituents.

"The principles on which practice must be based consists mainly, (1) in cutting off one or another of the urinary poisons at their source, now that we know to some extent what those poisons consist of, and whence they are derived. Under this head we recognize the great importance (*a*) of limiting potassium salts both

in food and medicine, (*b*) of employing the simplest and most easily assimilated diet, such as milk, (*c*) of bowel disinfection, (*d*) of maintaining at its best the action of the liver, (*e*) of care in the nature of nutrient enemata when these are required. (2) Indirectly and directly withdrawing or diluting the uremic poison, by (*a*) venesection, (*b*) purging, (*c*) sweating, (*d*) transfusion. 3. By burning up the poison, by (*a*) active exercise, (*b*) the administration of oxygen or oxidizers. 4. In antagonizing the poison or at least overcoming special symptoms.

One practical point on which he lays some stress is the substitution of sodium bromide and other sodium salts for the potassium salts, as those are much less toxic than these.

The importance of simple diet has long been established by clinical experience, and more recently the administration of antiseptic remedies as iodoform, naphthalin, iodol and animal charcoal has been attended with favorable results, as observed by Bouchard, Tapret, and Dr. Carter himself.

The expediency of blood-letting depends upon the general condition of the patient. If there is a hard quick pulse Dr. Carter holds that a moderate bleeding would do no harm, even if the patient is anemic, while it would be likely to be of decided advantage if the patient is not anemic.

Dr. Carter regards transfusion as of value in this trouble, and places a high estimate upon the use of purgation and diaphoresis, and he also commends the use of oxygen by inhalation. Attacks of uremic asthma are relieved most promptly, in Dr. Carter's experience, by the administration of ozonic ether in doses of half a dram to a dram.

YELLOW FEVER.

With regard to the epidemic of yellow fever in our southern states, the daily press has given more of detail from day to day than we have space for, more than would be of interest to our read-

ers here. We can only call attention to some matters of general interest on the subject.

The last serious epidemic of this disease in the United States occurred in 1878-9, just ten years ago, when Memphis lost by death nearly one-third of her whole population, and even farther north the disease caused much solicitude and some mortality.

The admirable report of Dr. W. H. Ford to the St. Louis Medical Society published by the society in 1879, contains the following tabular summary of cases of yellow fever occurring in St. Louis and vicinity in 1878.

	Recovered.	Died.	Total.
Cases of yellow fever treated in the city of St. Louis, in persons coming from points where the disease was prevalent.....	16	19	35
Cases of yellow fever treated at quarantine from all sources.....	59	38	97
Cases of yellow fever arising by contagion in St. Louis and suburbs not treated at quarantine.....	4	3	7
Cases of yellow fever arising by contagion in St. Louis and suburbs treated at quarantine.....	3	8	11
Cases of yellow fever or closely resembling that disease—where contagion could not be demonstrated—occurring in St. Louis and suburbs, not treated at quarantine.....	1	11	12
Cases of yellow fever or closely resembling that disease—where contagion could not be demonstrated—occurring in St. Louis and suburbs, treated at quarantine..		1	1
Cases of yellow fever treated in St. Louis, its suburbs and at quarantine in 1878.....	80	71	151
Cases of yellow fever treated in St. Louis and its suburbs and at quarantine in persons from cities where the disease prevailed (exotic cases).....	72	48	120
Cases of yellow fever arising in St. Louis and suburbs, in residents or persons who had not been to the South (indigenous cases).....	8	23	31

The great source of danger to our country as regards this disease has heretofore been the importation of the plague through the port

of New Orleans from Rio de Janeiro and other South American ports. The course adopted by the Louisiana Board of Health a few years ago, of immediate notification, thorough disinfection and modified quarantine of vessels and carriers from infected or suspected ports, has given most satisfactory results; and not only our own people but the sanitarians of other countries as well are greatly indebted to Dr. Joseph Holt and the Louisiana Board of Health for a demonstration of the results which can be attained by judicious and thorough sanitary precautions in protecting a country from such dangers as have repeatedly threatened and assailed the Mississippi Valley through New Orleans.

Probably the yellow fever is never absent from the city of Havana, which is in close communication with Key West and Tampa by a line of steamers which forms the shortest and most direct route from Cuba to the United States. It is an unfortunate thing for Florida and the adjacent states that a similar policy to that which has been so successful in Louisiana was not adopted there. Prompt measures taken a year ago when the disease made its appearance in Tampa, Plant City, Manatee, and other Gulf ports of Florida, might have stamped out the disease or put those cities in such good sanitary condition as to greatly diminish or wholly avert danger from the disease.

Instead of this, however, the old time suicidal policy was adopted of concealing and denying the presence of the disease in their ports, and as the result the disease assumed an epidemic form, many valuable lives have been sacrificed, thousands of dollars have been lost, and the commercial interests of Florida have suffered losses from which it will take many years to recover.

The Therapeutic Gazette August 1888, contains a paper from Dr. Geo. M. Sternberg in which he makes a suggestion as to treatment based upon the results of his studies of the disease in foreign countries during the last few months.

He has been led to the opinion that in this disease, as in cholera, the micro-organism causing the disease is located in the alimentary

canal, which naturally suggests intestinal antiseptis as a mode of treatment.

He remarked the well known fact of the highly acid reaction of urine and vomited matters in yellow fever; and he has found the intestinal excreta also to have a more or less decided acid reaction. Hence it is inferred that any microbe capable of multiplying in the stomach and intestine must be able to grow in an acid medium. Besides this theoretical reason for prescribing alkalies the acid condition of the secretions furnishes an indication for an alkaline treatment.

Combining these two indications he suggested the following formula:

R Sodii bicarb., - - - grammes x. (gr. 150.)
 Hydrarg. chlor. cor., - - centigr. ij. ($\frac{3}{10}$ gr.)
 Aquæ puræ, - - - - litre j (1 qt.)

M. Sig. 50 grammes (about $1\frac{3}{4}$ oz.) every hour. To be taken ice cold.

This treatment was tried by Dr. Raphael Weiss, of the Garcini Hospital, and he had reported to Dr. Sternberg the result in twelve cases. He states that of twelve cases so treated every one recovered, while of eight cases treated in the same institution by other methods five died.

We shall look with interest for further reports concerning the efficacy of this plan of treatment, which will doubtless have been tried in this epidemic sufficiently to enable us to form a fair estimate of its value.

As regards the treatment of yellow fever, we have not seen yet any reports as to the comparative results of treatment by different methods in the present epidemic. All agree that prophylaxis and disinfection are of the utmost importance.

As to curative measures we would call attention to a plan of treatment suggested and used by Dr. Ernest Hebersmith, U. S. M. H. S. (*Med. Bulletin*, Nov. 1887.) This consists in the hypodermic use of pilocarpine in the dose of one-fourth grain, only one in-

jection being generally administered. Improvement was prompt, both as to temperature and pulse, and there were none of the usual stomach and bowel troubles which accompany the disease under the common methods of treatment.

Dr. W. H. Ford in the report to the St. Louis Medical Society to which we have above referred speaks most emphatically in commendation of the use of *veratrum viride* in the treatment of yellow fever as being the most effective mode of treatment with which he was then acquainted.

We have not seen any accounts of the use of this agent during the present epidemic.

INTERCOLONIAL MEDICAL CONGRESS.—Arrangements have been made for a Congress of Physicians from all different parts of Australasia to be held in Melbourne, Australia, in January, 1889. It is anticipated that about about 500 physicians will be in attendance, among them being the presidents of the various medical associations throughout Australasia, the medical advisers of the different governments, professors and lectures in the several medical schools, and other prominent members of the profession.

The presiding officers of the several sections are men of prominence and ability from the various colonies, while the more onerous duties of the secretaries have been assigned to the most active workers of Victoria.

There will be nine or more sections, and addresses are to be delivered by the presidents of each section before the general meeting of the Congress.

In preparing the programme, provision is planned for several general meetings in which are to be discussed subjects of universal interest.

The meeting is to be held in the building of the university.

Members attending from Europe, America or India, will receive free passes over all Victorian railways, and special rates are promised by various shipping companies.

Though it is not probable that any of our readers will attend this meeting, it is pleasant to know of the plans for such a gathering of physicians on the opposite side of the world.

BOOK REVIEWS AND NOTICES.

INDEX CATALOGUE of the Library of the Surgeon-General's Office, U. S. Army. Vol. IX. Medicine (Popular) Nywelt. Washington, Government Printing Office. 1888. 4to, pp. 1054, cloth.

We need only call attention to the issue of the ninth volume of the invaluable Index-Catalogue. An interesting feature is the evidence of the growth of literature regarding the nervous system and its diseases, presented by the fact that 140 pages of this volume are taken up with titles on this subject.

PHYSICIANS' INTERPRETER in Four Languages, specially arranged for Diagnosis, by M. von V. F. A. Davis, Publisher, Philadelphia, Pa. 1888. 32mo., end opening, pp. 206, Russia, \$1.00.

This little volume is one of the most ingenious aids to the physician which we have seen. As stated in the preface, it is prepared by one who has had experience in hospital work and has been frequently called on to interpret for foreigners.

He has arranged in parallel columns in the English, French, German and Italian a variety of questions and remarks such as would be made in examining a patient, or in giving directions as to treatment. The pages are interleaved so as to allow of additions with pen or pencil.

We heartily commend the book to any one who being without a knowledge of the foreign languages is obliged to treat those who do not know our own language.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF THE STATE OF MISSOURI at its Thirty-first annual Session, 1888, 8vo., pp. 462, paper.

The volume of Transactions of our State Association this year is an unusually large one. It will be remembered that the statement was made in the report of the meeting that so much time was taken up with reading papers that there was none left for discussions. A number of the best papers have already appeared in the pages of the COURIER. The volume is a very creditable one to the Association.

BOOKS AND PAMPHLETS RECEIVED.

BOOKS.—Transactions of the Medical Association of the State of Missouri at its thirty-first annual session, held at Kansas City, Mo., April, 1888, 8vo., pp. 462.—Excessive Venery, Masturbation and Continence. By Joseph W. Howe, M. D., etc., New York. E. B. Treat, 1888. 8vo., pp. 299; cloth, \$2.75.—Pharmacology, Therapeutics and Materia Medica., by T. Lauder Brunton, M. D., etc., adapted to the U. S. Pharmacopeia, by Francis H. Williams, M. D., third edition. Philadelphia, Lea Brothers & Co., 1888, 8vo., pp. 1261; sheep.—Text-Book of Human Physiology, by Austin Flint, M. D., LL. D. Fourth edition, entirely rewritten. New York, D. Appleton & Co., 1888, 8vo., pp. 872; cloth, \$6.00.—Index Catalogue of the Library of the Surgeon General's office, U. S. Army, Vol. IX. Medicine (Popular) Nywelt, Washington: Government Printing Office, 1888, 4to, pp. 1054, cloth.

PAMPHLETS AND REPRINTS.—The Central Pacific Railroad: its Relations with the Government; Argument of Creed Haymond. 8vo., pp. 28, paper.—Pacific Railroads. Statement of Leland Stanford. 8vo., pp. 28, paper.—Some of the Advantages of the Union of Medical School and University, by William H. Welch, M. D., etc. (New England and Yale Review, Sept., 1888.)—American Hip-Splint, by Dr. A. B. Judson, of New York. (Trans. 9th Int. Med. Cong.)—Electrolysis: Its Value in Diagnosis as well as Treatment of Intra-abdominal and Intra-pelvic Tumors, by Eugene C. Gehrung, M.D., St. Louis. (Am. Jour. Obst. and Gyn., Aug., 1888.)—Case of Poisoning by Sulphate of Atropia; Recovery. By Llewellyn Eliot, M. D. (Jour. of A. M. A., Sept. 1, '88.)—New York Post-Graduate Medical School and Hospital Seventh Annual Announcement, 1888-9.—Annual announcement of the New York Polyclinic and Hospital, Session of 1888-0.—Artesian Water Co.'s Wells, Memphis, Tenn.

THE UNIVERSITY MEDICAL MAGAZINE is the latest venture in medical journalism. It is the organ of the Medical Department of the University of Pennsylvania, and its special object is to increase the interest between the graduates and their Alma Mater. Drs. DeSchweinitz and Hare are the managing editors, and the editorial staff embraces the faculty of the University. There is a brilliant outlook for the new journal.

REPORTS ON PROGRESS.

MEDICINE.

BY L. T. STEVENS, M. D.

Relation of the Diseases of the Kidney, especially the Bright's Diseases, to Diseases of the Heart.—DR. J. M. DaCOSTA, in the recent Middleton Goldsmith lecture, delivered before the New York Pathological Society, discusses certain important aspects of this problem. Two main questions are presented: Does disease of the heart lead to disease of the kidneys, and what is the relation of renal diseases to cardiac affections? With reference to the first point, the author presents the results of a careful analysis of 127 cases of valvular disease, of which but 8 cases presented actual renal disease amounting to more than simple congestion. These results offer a strong contrast with the statistics of Delafield, in which, of 137 cases of death from heart disease, there were 27 large white kidneys, 29 atrophied kidneys, and 28 of chronic nephritis. His conclusion is that valvular diseases rarely lead to any affection of the kidneys beyond that of chronic passive congestion. On the second point the following statistics are offered: In 101 cases of Bright's Disease (57 acute, 44 chronic), there were 41 instances of valvular affection. Of these 41, 29 were cases of chronic Bright's disease, and 12 were of the acute type. Of the 29 cases, there is an antecedent history of rheumatism in 13; of the 12, the same in 3. The character of the kidney affection in combination with valvular lesions, is in the vast majority of cases the contracted kidney; next comes acute nephritis. One of the most interesting points in this connection is the author's experience in 79 cases of acute Bright's disease. In only 16 was there valvular disease, but in none of them, nor of the remainder, could hypertrophy be determined. These results are opposed to the generally accepted doctrine of Traube, that even in acute nephritis, hypertrophy of

the left ventricle can be determined within a month or six weeks from the date of the onset. The various theories advanced to explain the hypertrophy without valve lesion, so commonly associated with chronic interstitial nephritis and generally with arteritis, were reviewed and found inadequate, and the suggestion is made that the hypertrophy, as well as the vascular changes, are the result of a common process which originates in the ganglionic system. In 11 cases changes were found in the inferior cervical ganglia, indicating atrophy and fibrosis. DaCosta believes that a solution of the problem will be found in a deranged nerve influence, depending upon widespread changes in the ganglionic system.—*Med. News*, May 5, 1888.

Arterial Pressure in Bright's Disease.—DR. BROADBENT (*Lancet*, March 10, 1888) speaks of the prognostic significance of the blood pressure in acute renal disease. He said that although high arterial tension was present in almost every form of kidney disease, yet he had twice seen low tension when symptoms of renal cirrhosis were present. In acute renal dropsy, when the pulse-beats were short and easily arrested, it indicated temporary dilatation and weakness of the left ventricle; from this the heart afterwards recovered. A continued defect of tension might be due to persistent cardiac weakness, and in this latter was of important prognostic import; in other cases it indicated diminished peripheral resistance, which was also of bad augury. In the discussion which followed the reading of the paper before the London Medical Society, Dr. Magnire said that by drawing attention from the renal condition to the circulatory system, the author had led the way to rational treatment. He had found cases of high tension best relieved by calomel and salines; those of low tension by nux vomica and iron.—*Therap. Gaz.*, May, 1888.

On the so-called Presystolic Murmur.—DICKINSON (*Lancet* II., 1887, p. 695) attempts to prove that the so-called presystolic murmur is produced not before, but in systole, although it is heard before the first sound of the heart. It belongs not to the systole of the auricle, but of the ventricle; it is, therefore, a sign of mitral insufficiency, which is distinguished from the ordinary murmur of this disease by its ceasing with the beginning of the first sound of the heart. Now since a diseased valve in general is capable of closing only when the opening is narrowed, the so-called presystolic

murmur points to a stenosis. In contra-distinction to the ordinary mitral murmur, which he designates as the "full systolic," he calls the murmur in question "early systolic;" while the weak and infrequent murmur with mitral-stenosis, the true auriculo-systolic, is to have its name "direct mitral" or diastolic mitral."—*Schmidt's Jahrb. f. ges. Med.* 1888, p. 154.

Variations of Blood-Pressure and Pulse-Tension from Changes of Position in the Well and Sick.—L. SPENGLER (Inaug. Diss. Zurich, 1887), on the basis of numerous investigations with the Dudgeon's sphygmograph on healthy and sick individuals, arrived at the following conclusions:

1. In health blood-pressure and pulse-tension are lowest in the erect, greatest in the lying posture; and the same holds true, in general, in fevers. The difference amounts to 10 to 12%.

2. In pneumonia after the crisis, the variations of blood-pressure with changes of position are very much greater, amounting to 40 to 60%; it is greater the severer the previous disease, and lasts the longer, the slower the convalescence.

3. In cardiac failure and chronic nephritis, these variations are the smaller, the better the compensation and the greater the hypertrophy of the heart muscle.

4. In the fatty heart the variations are very pronounced, and by means of sphygmographic tracings the diagnosis of fatty heart can be established very early, and the capabilities of the heart can be tested.—*Schmidt's Jahrb. f. d. ges. Med.* 1888, p. 154.

Saccharin in Diabetes.—PURDY, of Chicago, draws the following conclusions from his clinical observations upon saccharin:

1. In this product we possess a flavoring agent for food and drink, the palatability of which is quite equal to that of the finer grades of sugar, and which may be used by diabetic patients with the greatest impunity.

2. Through its antiseptic properties it retards the abnormal fermentative changes in the stomach so common in diabetic patients, thus promoting digestion and relieving flatulence.

3. While as yet we are without sufficient practical data to judge of its blood effects in large doses to diabetic patients, yet both chemistry and physiology would indicate its use for the purpose of favorably influencing some of the more fatal complications of the disease.—*Med. News*, March 17, 1888.

Salicylate of Soda in Polyuria.—DR. I. N. RANDALL, of Decatur, Ill., reports a case of polyuria occurring in a girl, æt. 11 years. The urine was voided in daily amounts of 9 pints or more; it was found to contain no sugar. The fluid extract of valerian, and ergot and tannic acid were successively tried without any effect; the quantity of urine remained the same, and the child was growing steadily weaker. Finally, salicylate of soda was tried in 8 grain doses after each meal, with the result that improvement began immediately in her special and general condition, and in the course of several months the urine returned to its normal amount, and the patient had recovered her general health. The dose was at one time increased to 10 grains, but so much complaint of headache was excited that the use of the drug had to be suspended for a few days. —*Med. News*, April 7, 1888.

Pilocarpine in Bright's Disease.—BENEZIN and CSATARY give the following summary of a series of articles on this subject:

1. The patients become accustomed to the pilocarpine, and even large doses, such as one grain, do not at a later period produce such disagreeable after-effects as doses of $\frac{1}{6}$ -grain at the beginning of treatment. The injections of pilocarpine should not be discontinued in consequence of symptoms which had been considered as being dangerous.

2. The effect of pilocarpine on the daily secretion of saliva, sweat and urine, as well as on the daily oscillations of the amount of hemoglobin in the blood, is in most cases regulated by the stage of the disease, and by the quantity of liquid which had been taken.

3. The edema disappeared the most rapidly, the larger the dose of pilocarpine given, and the less the quantity of liquid which the patient has taken.

4. Pilocarpine considerably increases the density of the blood for from four to five hours.

5. The hydremia in Bright's disease does not depend on the amount of the edema.

6. The quantity of hemoglobin in the blood diminishes, that is to say, the hydremia increases when the general condition of the patient becomes impaired during the course of the disease.

7. When used according to the above-mentioned principles, pilocarpine will be found in most cases of Bright's disease, even

when hot baths and other diaphoretics prove useless, always to diminish dropsy to such an extent that the patient is more or less protected against dangerous uremic suffocative attacks. In this way it may be possible to obtain a relative cure; that is, in secondary granular contracted kidney.—*Brit. Med. Jour.*

Some Points in the Treatment of Chronic Albuminuria, or Bright's Disease. Dr. C. S. Woods, of New York, is a firm believer in the malarial origin of many cases of chronic renal disease. As is well known, albumen is often present in the urine of patients suffering from intermittent fever, especially on the fever days, sometimes during the intermission as well; and, although it usually disappears after the subsidence of the chills, still there is abundant evidence to show that this is not always the case. The author emphasizes the importance of continuing treatment in all cases for a long time after the chills have been broken up, for the purpose of eliminating the malarial poison altogether from the system, and to bring the health and vigor up to the original point, as prophylactic measures against the occurrence of a sequent chronic renal disease. The most important remedies for accomplishing this desirable result are arsenic and iron. In cases of malaria with kidney difficulty, after the chills have been broken, and small doses of quinine with iron (preferably solution of ferrous mallate) until the cachexia is removed, a pill containing arsenious acid, chloride of gold and soda, each grain $\frac{1}{20}$, and iron by hydrogen gr. 2, should be taken after eating, and continued for a long time. In addition, bichloride of mercury, in dose of gr. $\frac{1}{60}$ gradually increasing to gr. $\frac{1}{20}$, dissolved either in cinchona or infusion of digitalis, should be administered three times a day. When dropsy occurs, all remedies should be temporarily withheld and one grain doses of calomel guarded with gr. $\frac{1}{3}$ of opium be used as a sure means of relief. By pursuing this course of treatment persistently and steadily for a long period of time, the disease may be largely controlled and in many cases cured, but where cure is impossible, its progress is delayed, and the patient may live in comfort for a number of years.—*Med. Rec.*

Treatment of Dyspepsia.—Dr. WILLIAM MURRELL, of London, in a lecture delivered at the Westminster Hospital, brought out the following practical points:

For practical purposes, two great classes of dyspepsia might be recognized—one in which there is a deficient secretion of gastric juice, amounting sometimes almost to suppression, and another in which there is an excess of acid, due either to hypersecretion of acid or fermentative processes. There is still another and rarer form, in which the food is retained but a short while in the stomach, and is then passed on into the intestines, where it excites peristalsis and gives rise to copious evacuation immediately following each meal. The treatment of the first form is very simple, being dependent on the principle that alkalis increase the secretion. The choice of alkali is a matter of convenience and custom, the favorite one is bicarbonate of sodium, which is generally prescribed with some stimulating bitter tonic. As an accessory measure it is useful to give a few drops of dilute hydrochloric acid, with or without *nux vomica*, immediately after meals. In the treatment of acid dyspepsia one pursues an exactly opposite system of tactics. The usual prescription is 15 drops of hydrochloric acid with tincture of *nux vomica* or gentian, 15 minutes before eating. Sometimes this fails to check the formation of all the excess of acid, and then the best plan for relief is to administer a compressed tabloid of bichloride of potassium or a dose of salvolatile. Occasionally one succeeds in getting rid of the acidity only, and fails to remove the flatulence; then the administration of an antiseptic gives almost immediate relief—carbolic acid or creosote, one of the essential oils, or better still, pure terebene or pinol. Arsenic has been proved to be wonderfully useful in the third form, and is equally good in gastritis simulating dyspepsia. A good indication for its administration is when the tongue is furred and covered with red and irritable papillæ. A drop of Fowler's solution is given every three hours, or a tabloid containing $\frac{1}{100}$ grain of arsenious acid before each meal. Opium in small doses is useful, and *nux vomica* is the best remedy when there is complaint of pain and weight at the pit of the stomach accompanied by acidity and heartburn. Pepsin is a very valuable remedy for dyspepsia, if properly prescribed. In the first place, there is the greatest difference of the various preparations. Fairchild's is by far the strongest of all. Furthermore, it is generally given in insufficient doses, 15 to 20 grains should be administered at one time to an adult. The vegetable pepsin cannot compare in activity with the best pepsin. In many forms of dyspepsia, especially 'starchy dyspep-

sia," extract of malt is found to be the most powerful therapeutic agent. The condition of the teeth is a matter of the greatest importance. The habit of taking meals hurriedly and alone is a fertile source of dyspepsia. Meals should be taken in a bright, pleasant well-lighted room, and too much attention cannot be paid to accessories of the table. The food should be abundant and varied in quality, whilst the post prandial cup of coffee, with a cigar or cigarette, might rank as a useful therapeutic agent. A fair amount of stimulant often serves as an aid to digestion. The American custom of drinking large quantities of ice-water at the beginning of a repast might prove injurious by diluting the gastric juice. The plan followed by many of placing all the dishes on the table at once is not recommended, especially in cases of patients with small appetites and weak digestion. A trip across the Atlantic is a frequent means of effecting a complete cure. Massage is a valuable accessory agent, and seems especially adapted for ladies who require rest and relaxation and freedom from the cares and worries of every day life.—*Medical Register*, Feb., 1888.

Therapeutic Value of Bismuth Salicylate.—DR. W. H. L. HOLT, of Philadelphia, reports his experience with this drug as follows:

In inflammatory affections of the gastro-intestinal tract, it has seldom failed to accomplish the desired result and permanently cure the disease. In half-dram doses at intervals of two hours, it is capable of materially lessening the exhausting diarrheas of phthisis. In cholera morbus, after the cause has been removed, it quickly reduces the existing inflammation and induces a cessation of the morbid action. In acute sporadic dysentery it has proved efficacious in full medicinal doses, rapidly reducing the amount of blood and mucus in the stools and relieving tenesmus. In the diarrhea of typhoid fever, especially in children, it in conjunction with a small amount of opium has frequently succeeded when other well-known remedies have failed. In dyspepsia, with acid eructations and pyrosis, with a feeling of heaviness at the stomach after eating, bismuth salicylate, in combination with a simple bitter, soon tones up the organ and relieves the disorder. In the beginning of treatment, full and divided doses should be administered. In severe cases occurring in children, the dose at the start should never be less than 5 to 8 grains. The following formula is a good one for children:

R	Bismuthi salicylatis,	-	-	-	-	-	3ij
	Tr. capsici,	-	-	-	-	-	gtt. xij
	Spts. ammon. arom.,	-	-	-	-	-	3iss
	Pulv. acaciæ,	-	-	-	-	-	3ij
	Aquæ cinnamomi,	-	-	-	-	-	q.s. ad. 3ij

M. Sig. A teaspoonful every two hours, for a child from three months to one year of age. In adults it is best administered in powder form.

The beneficial action of the drug is due as much to the antiseptic power of salicylic acid as to the astringent properties of the bismuth. It has also proven useful in many cases of vomiting, in 5 grain doses: even the vomiting of pregnancy has soon yielded to it, and its recurrence been prevented by its continuance in small and frequently repeated doses.—*Polyclinic*, March 1888.

Papoid, Vegetable Pepsin.—DR. I. AULDE, of Philadelphia, after an experience of 6 or 7 months with this substance, speaks of it as follows: If taken before or with meals, when the secretions are normal, papoid appears to possess characteristic amyolytic properties, and will materially aid digestion; but there frequently exists an obstacle to this simple procedure, as the secretions are abnormal. Thus, the saliva presents an acid reaction, the gastric juice is lacking in solvent properties; perhaps it is too acid, or may be combined with accumulations of mucus. These conditions must be overcome by suitable measures. In case the saliva is acid, a small amount of some alkali may be added, or, when there is reason to believe that an accumulation of mucus interferes with digestion, a small quantity of some simple bitter, or a more stimulating remedy such as aromatic spirits of ammonia, given at the same time, seems to answer the purpose admirably. Should there be an oversecretion of acid in the stomach, the effect of the papoid will not be perceptible until the food passes the pylorus, and even then the results will be far from satisfactory. Under these circumstances, measures should be adopted for the purpose of lessening the amount of gastric secretion and changing its character. Intestinal indigestion may be greatly relieved, and in many cases practically cured, by the judicious exhibition of papoid. It is useful in all forms, but its value is more rapidly noticeable in those cases where constipation is a prominent factor, accompanied by distention within a couple of hours after taking food. The method I have

adopted consists in the administration of two grains of papoid in capsule before meals, the dose to be repeated two hours later, if flatus occurs. A few days only are needed to effect a marked improvement, the whole digestive apparatus being favorably influenced. One particularly valuable application of it is in the treatment of attacks of dull, disagreeable headache, dependent upon indigestion; a two grain powder in capsule will generally disperse it in from 3 to 5 minutes.—*Med. Register*, May 5, 1888.

Strychnine in Alcoholism.—KORONA, of Tiflis, summarizes his results as follows:

1. In acute intoxication strychnine is completely inactive.
2. In 10 out of 11 alcoholic patients, after 3 or 4 injections of the drug, there appeared an aversion to aqua vitæ.
3. It is the most effective remedy for dipsomania, but the treatment must be repeated in course of time.
4. It is also a very good remedy for chronic alcoholism, when it is accompanied with such symptoms as neuralgic pains in the lumbar region and calf of leg, tabetic gait, trembling of hands, etc. A hypnotic effect of the drug is also very pronounced.
5. The remedial value of strychnine is very slight in cases of alcoholism unaccompanied by any symptoms.
6. Strychnine does not possess any cumulative action, so far as alcoholists are concerned.
7. It is not impossible that in the treatment of alcoholists by hypodermic injections of the drug, the latter also not in a psychological way.—*London Med. Rec.*, March, 1888.

Treatment of Sleeplessness—DR. A. S. ECCLES, concludes a valuable paper on the use of mechanical and hydro-therapeutical agents in insomnia, as follows: The hot bath, the hot abdominal compress, with or without previous kneading of the belly, or the whole wet pack modified to suit the requirements of the case, and all of these followed by the most rigid observance of the recumbent position in a warm bed placed in a quiet, cool, well-ventilated room, so arranged that direct or reflected light, whether from fire or candle, shall not disturb the patient, have been found almost invariably successful aids to sleep in the different disorders of this function dependent on pyrexial or severely painful conditions which have come under the notice of the writer. And even in cases of severe sciatic and trigeminal neuralgias the wet-pack has been employed

with good results; but for the various derangements of sleep included under the general term insomnia these expedients are only temporarily useful to initiate as it were the permanent restoration of the rhythmical healthy repose of mind and body. To effect this permanent restoration of refreshing sleep a method of treatment is needed which must break the chain of vicious circumstances under whose thralldom the patient has lost the power of sleep. The brain, in these cases often found to have been overworked, must be allowed to lie fallow as far as possible; the stomach, which has generally suffered with the other organs of digestion from the most extraordinary maltreatment, must be coaxed back again to a regular performance of its duties; while the muscular system, which has become wasted and inert from every disease must be called upon to fulfil its digestive and excrementitious functions, so long left in abeyance. Under the combined influence of the recumbent position in a quiet room away from the cares of domestic, social or business life, carefully modified diet, and massage applied as a therapeutical agent, not without regard to the mode, duration, and extent of its administration, the methods of treatment referred to above may be carried out with the happiest result in the majority of cases.—*Pract.*, March, 1888.

Sciatica Caused by Varicose Veins.—QUÉENCE, of Paris, reports that in 76 patients who had varicose veins, 11 patients suffered from sciatica which disappeared with rest, and especially when the patient took the horizontal position. He recommends that the patient should wear an elastic stocking reaching up to the groin, the objection to which, as raised by M. Berger, is that the stocking leaves its position and rolls like a tight cord around the thigh, thus impeding the return of the circulation.—*Med. News*, March 31, 1888.

Coinine Bromide in Traumatic Tetanus.—DEMME reports a case of traumatic tetanus occurring in an 11 years old boy, treated with remarkable success by this drug. On the fourth day convulsive symptoms were first observed in the lower extremities, these were followed shortly by a general tetanic convulsion of the whole body. One-sixth of a grain of bromide of coniine was immediately administered under the skin, and one-twelfth of a grain subsequently given every two hours. The tetanic convulsions did not reappear. The next day the boy received four one-twelfth grain

doses of the drug. In a week from the date of admission, the boy was discharged well.

On account of its well known paralyzing effect on the respiratory muscles, the administration of this drug should be accompanied with extreme caution, and should only be attempted where the patient can have constant medical attention. The dose is one-twelfth to one-sixth grain for children, and twice that amount for adults. It should be given every hour, but discontinued as soon as any symptoms of respiratory paralysis are observed, as evinced by shallowness, irregularity and increased frequency of respiration. The immediate application of artificial respiration seems to be the best method of checking the approach of this respiratory paralysis. —*Therap. Gaz.*, May, 1888.

The Treatment of Pruritus Pudendi by Peppermint Water.—ROUTH. (*Brit. Med. Jour.*, April, 14, 1888) has used this as a lotion in pruritus at the Charing Cross Hospital, and describes his mode of use and results as follows:

The B. P. preparation of aq. menth. pip. answers well, but is bulky for carrying about, and is incapable of concentration unless rendered alkaline. This is best done by borax, in itself soothing and antiseptic. Patients can easily make their own lotion by putting a teaspoonful of borax into a pint bottle of hot water, adding 5 drops of ol. menth. pip., and shaking well, the parts affected to be freely bathed with a sponge. If no cracks or sores are present, this lotion will remove the itching, but if there be eczema etc., or redness from scratching, it is inapplicable, olive oil with 5 grains of iodoform to the ounce being the more useful. The greatest and most permanent relief is afforded in the neurosal form, especially in the reflex pruritus often accompanying pregnancy, and which then may take the place of reflex sickness or vomiting. It is also very useful in the pruritus which occurs in the climacteric, or in elderly women, in whom it may be only part of a general pruritus, and also in those cases of women or all ages, where the urine simultaneously becomes of very low specific gravity, without any evidence of having a gritty or granular kidney as a remote cause: In pruritus due to pediculi, ascarides, an irritable urethral caruncle, an endo-cervical polypus, early cancer of cervix, distention of Bartholin's ducts or glands, the leucorrhea of vaginitis, endo-cervicitis, and metritis, or the irritating discharges of ad-

vanced carcinoma uteri, or to a gritty or diabetic diathesis, the drug excels all others cocaine inclusive, in affording relief, whilst endeavors are being made to relieve the cause.

In two obstinate cases of uncontrollable pruritus of pregnancy, where this remedy gave only temporary relief, the patients were cured by applying iodine liniment to the angry-looking cervix-uteri.—*Med. News.* May, 12, 1888.

DISEASES OF THE NERVOUS SYSTEM.

BY FRANK R. FRY, A. M., M. D.

The Medical News has contained of late a series of very interesting lectures by Prof. William Osler, of the University of Pennsylvania, on *The Cerebral Palsies of Children*. They have been very exhaustive, and arranged in such a way as to make a brief extract of any one of them of little value. In the aggregate they will be a splendid source of information on this subject. We have waited with some interest for the remarks on *Pathology*. They appear in Lecture V of the series, Aug. 11, 1888. We quote portions of it.

“A small proportion of the cases of hemiplegia came under the designation of birth palsies, as we have history of the persistence of the paralysis from birth and of the occurrence of difficult labor, often necessitating the application of forceps. In the cases of birth palsy which result usually in bilateral hemiplegia, or paraplegia, the evidence points strongly to meningeal hemorrhage as one of the chief causes of the disorder. The great majority of these, as we have seen, present at birth one of two conditions, asphyxia or convulsions. The children are resuscitated only after prolonged attempts at artificial respiration; more commonly convulsions occur either immediately after birth or within the first ten days of life. Facts have been gradually accumulated to show that hemorrhage, usually meningeal, is a very frequent condition in children dying shortly after birth of asphyxia or convulsions, and as the birth palsies almost invariably have this history, it seems reasonable to conclude that in the cases which recover and subsequently present signs of motor disturbance, a similar, though less intense, lesion has existed.”

"The frequency of spinal hemorrhage renders it not improbable that some of the cases of spastic paraplegia may be due to this cause; and Ross suggests that as traction in feet presentations has been known to tear the cord, slighter degrees might injure the pyramidal tracts, and lead to a sclerosis."

"When we turn to the cases of infantile hemiplegia, which come on during the first two or three years of infantile life, we are met at once with conflicting theories. It is well to bear in mind that we are called on to explain the mode of origin of sclerosis and parencephalus, the two conditions present in the great majority of cases. A certain number of cases of infantile hemiplegia are due to hemorrhage, to embolism, and aneurism, a few to tumor, as glioma or chronic tubercle, but these form a fractional part. We require to know the pathological process lying at the basis of the convulsive attacks with coma, which come on suddenly, or after a slight febrile movement, frequently succeed an infectious disease, and leave a hemiplegia with too often its disastrous sequences—epilepsy and imbecility.

In a large proportion of cases the disease is such a clinical unit, with symptoms as marked and definite as those of infantile spinal paralysis, that we might expect a corresponding uniformity in the anatomical lesion. Unfortunately we are, so far as I can ascertain, entirely without information upon the state of the brains of children dying during or shortly after the attack; and the question resolves itself into an explanation of the conditions most commonly met with years after the onset, viz., sclerosis and proencephalus."

"To sum up: Infantile hemiplegia is probably the result of a variety of different processes, of which the most important are (1) Hemorrhage occurring during violent convulsions, or during a paroxysm of whooping cough, (2) Post-febrile processes; (a) embolic; (b) endo- and peri-arterial changes; (c) encephalitis. (3) Thrombosis of the cerebral veins."

Observation on Inflammatory and Other Changes in the Minute Vessels of the Pia Mater.—By HANDFIELD JONES, M. B. (Cantab) F. R. S., London, England. This article contains many suggestive observations, and the various changes in the capillaries are illustrated by a method that is very satisfactory. Our space only permits us to give a few extracts, that will show the character of the contribution:

The main features of the inflammatory process now described are: (1) The excessive formation of indifferent cells; (2) the degradation of the special structure of the arterioles; (3) the ameboid wandering of the corpuscles; (4) the thickening of the pia by the fusion down of corpuscles and the development of plexiform filaments; (5) the presence of endothelial accumulations in some of the arteries. Inflammation is evidently in its essence degenerative, and depends for its existence on detriment of the higher power, whatever we term it, which originally formed organized structure, and in health maintains it. When this fails the lower powers of indifferent cell-growth and of amebism are let loose and run riot. A muscular band has a special structure, a function, and a place; an indifferent cell has none.

Atheroma.—The atheromatous change appears to me, after numerous careful examinations to consist essentially of a deposition of oil on the surface of the intima, or at a little depth below it. The oil drops vary greatly in size from the most minute to the largest, say one five-hundredth of an inch in diameter, and are unmingled with any other formed substance, except occasionally with granules very numerous and much resembling micrococci. The atheromatous matter as it accumulates, encroaches on, and causes wasting of the wall of the arteriole, which, in some places, yields and gives rise to aneurismal bulging of well-marked character. The nature of the deposit is well shown by the blackening effect of osmic acid. The patches are often singularly local, a trunk with numerous primary and secondary ramifications remaining healthy, except in a few spots. This opposes the idea of the smaller patches being embolically derived from larger and more centric ones. (*Vir. Path. Trans.*, 1883).

Coagula.—In examining small cerebral vessels it is not rare to find colorless coagula in their channel. These are often microscopic, but often also are distinctly visible to the naked eye, especially when stained. They consist of amorphous basis-substance, with the usual fibrils and leucocytes, and contain besides, in most instances, if not in all, extremely numerous small granules, one three-thousandth to one one-thousandth of an inch in diameter. The larger sometimes appear as minute vesicles having a wall and pale contents; the smaller are more like solid particles, and have at sometimes an angular outline, or are more or less elongated.

The granules are more constant in the coagula than the leucocytes. Sometimes in a specimen a tract is occupied by granules only, while another adjacent is full of corpuscles or of corpuscles mingled with granules. The latter stain strongly with methylene blue or gentian violet, certainly more deeply than the fibrils between which they lie. They are not dissolved by liq. potassæ. Vegetations on the cardiac valves are sometimes very largely made up of these granules, sometimes contain few if any. They are found also in the sputa of lung inflammations in great abundance.—*Med. Record*, Aug. 25, 1888.

Two Cases of Cerebro-Spinal Meningitis.—GEORGE G. SEARS, M. D., reports: The following two cases are of interest not only as occurring in one family at a time when cerebro-spinal meningitis occurred only in rare sporadic cases, but also because they present a number of the rarer symptoms.

On September 17, 1887, Charles W., a well-built little fellow of two years, who had always been previously healthy, was taken with headache, occasional vomiting and sore throat. The pharynx was found to be considerably reddened, but otherwise physical examination was negative. There was constipation.

On the 20th there was considerable stiffness of the neck, and efforts to move the head caused pain. Both feet and ankles were somewhat tender and were much swollen, the swelling extending half-way to the knee and pitting on pressure. The pulse was small and rather weak. During the night he had two slight convulsions.

22d. The patient was drowsy and weaker, but otherwise his condition remained about the same. During the night he had a severe general convulsion, in which he died. The febrile movement was slight. A specimen of urine could not be obtained.

Obviously, without the evidence furnished by an autopsy, the diagnosis must be considered very doubtful, yet the record corresponds fairly well with a number of anomalous cases which are frequently reported as occurring during the prevalence of an epidemic, and offers many points of comparison with the early history of the second case, where the diagnosis seemed clear to others who saw the case with me, as well as to myself.

On the 19th, two days after Charlie was attacked, his sister Mary, eight years of age, who had been well up to this time, be-

came slightly feverish and complained of sore throat. The pharynx was somewhat congested, but beyond that physical examination revealed nothing abnormal. The tongue was slightly coated; the pulse was full and strong.

On the 20th she began to complain a little of headache and had diarrhea. The abdomen was distended and tympanitic, but nowhere tender.

23d. The headache has become much more severe during the past three days. It was noticed, yesterday, that the feet were somewhat swollen and edematous, and to-day the swelling has increased. Both ankles are very red and tender, the slightest touch causing her to shriek with pain. The wrists and elbows are also painful and tender, but there is very little alteration in their appearance. She complains now for the first time of a "stiff neck," and pressure over the cervical vertebræ is extremely painful. Instead of tossing restlessly about the bed, she now lies very quiet, occasionally moaning, with the head thrown back and held rigidly.

26th. The patient has scarcely slept at all during the past three nights, owing to intense headache, in spite of bromide of potash and morphia. She lies quietly on her back, with eyes half-closed, occasionally uttering a short, sharp cry, or screaming "Papa" or "Mamma," but she replies intelligently to questions, giving her answers in quick, explosive monosyllables. There is no photophobia, the pupils are equal and react well to light. Constipation has now become the rule, and from this time on an evacuation could be obtained only with the use of cathartics. For the past day or two the amount of urine has been diminishing, and during the last twenty-four hours but five or six ounces have been passed, which was high colored, smoky, and loaded with albumen. The skin is dry.

30th. Under the use of acetate of potash and seidlitz powders, the urine has risen to the normal amount. She complains less of headache, and the swelling of the feet has diminished and the redness of the ankles has disappeared.

During the following two weeks there was a gradual change for the worse. An erythematous eruption appeared for a day or two upon the face and chest. There was more complaint of stiffness of the neck and tenderness over the cervical spines, and the skin over the limbs became markedly hyperæsthetic. She lost greatly

in weight and was more drowsy, but still answered questions with intelligence. There was slight delirium at night. The pupils were equal, but dilated, and she became somewhat deaf.

On October 21, the temperature, which had been normal or subnormal for the four previous days, though without any amelioration of the symptoms, rose to 103.5° , and the patient became much more stupid. The right pupil is now considerably larger than the left. On the following day, the thirty-seventh day of the disease, she had a left-sided convulsion, after which she became comatose, and died a few hours later. The temperature, with the exception of the few days before death noted in the history, and the three days following the onset of the severe symptoms, when the thermometer registered 103.6° , 105° , and 104° , respectively, the morning temperature being given in each instance as the higher, rose but once to 103° . The rest of the time it varied between 100° and 102.5° , only occasionally reaching the latter point. The curve was erratic, and the morning temperatures were quite frequently the higher. The pulse rate varied considerably from day to day without apparent cause. The greatest variation noticed on two consecutive days was from 82 to 116. No autopsy could be obtained.

The treatment consisted in local application of ice, bromide and iodide of potash, and occasional doses of morphia. Salicylate of soda and oil of gaultheria were tried for the relief of the joint symptoms, but without apparent results.

The diarrhea, the distended abdomen, and the general indefiniteness of the symptoms, taken in connection with the season of the year, suggested typhoid fever for a day or two, but the later progress of the disease soon settled the question. As between tubercular meningitis and cerebro-spinal fever, I based my diagnosis on a good family history, the marked stiffness of the neck and retraction of the head, the hyperesthetic condition of the skin, the cutaneous eruption, the arthritic symptoms, and the absence on repeated examination of any evidence of tubercular deposits elsewhere.

A point of special interest was the occurrence of pharyngitis, which, with pneumonia, seems to be closely related to cerebro-spinal meningitis. In the epidemics in this country from 1811 to 1815, pharyngeal inflammations were unusually frequent, and during the epidemic in New York City in 1872, J. Lewis Smith says that, in his opinion, an unusually large number of cases of pharyngitis

occurred. Any figures which I am able to present are too small to be of much statistical interest, but it is, at least, a striking coincidence, if accidental, that of thirty-two cases which I was called upon to treat as district physician between the 15th and 20th of September, the two cases reported above not being included, there were three cases of pneumonia and nine of inflammation of the pharynx, as against nine cases of the latter affection occurring during the rest of the month, these eighteen cases being 11.6% of all cases treated. During the eleven months from June, 1887, to May, 1888, in which I was connected with the district, the nearest percentages to this in an average monthly clinic of over 160 new cases were furnished by the following: October with 9%, November with 8.4%, and December with 9.6%; but as scarlatina became epidemic in the middle of October, and continued till the middle of December, many of these cases probably owed their origin to scarlatinal infection. As compared with the Septembers of the preceding four years, the difference is quite striking, the highest percentage being 3.7 in 1883.—*Bost. Med. and Surg. Jour.*

Abscess of the Brain.—During my service as house-surgeon in the Boston City Hospital under the late Dr. Thorndike, it was my good fortune to see him trephine in a case of old injury to the skull, where years later cerebral symptoms developed, showing such persistent and progressive character that operative interference seemed demanded. Trephining was done, and I have never forgotten the look of that bulging, pulseless brain. Dr. Thorndike, with a narrow-pointed bistoury, boldly made a plunge into the brain, but failed to locate the abscess. He was then requested to make another attempt in a forward direction, but replied, "I do not feel warranted in doing more." The stupor increased, and the patient died that night; and at 7 A.M., when we went to the morgue to continue the search for the cause of the compression, it was a disappointment to find that the friends had removed the body immediately after death.

The case, however, impressed me deeply; and owing to the confirmatory tenseness and pulselessness of the brain, I always felt there was an abscess, and determined that should another such case present I would not fail to urge or continue the search.

The experience thus gained proved useful in the case of a United States sailor, whom, through the courtesy of Dr. Clark,

Surgeon U.S. frigate Hartford, I was asked to see in consultation, in company with Olof Page, M.D., (University of Pennsylvania).

While on shore the sailor had received a scalp-wound, he knew not how. This was seen by the assistant surgeon, who cleansed and closed it by sutures. Suppuration, however, set in, and the wound had to be reopened. Two months later he had an epileptiform seizure, followed by headache, increasing drowsiness, stupor, and a falling pulse, which, when seen, was 46. Ether was administered, and Dr. Clark operated, making a crucial incision over the seat of injury, thereby disclosing a fracture, and with a trephine one inch in diameter, removed a section of bone. The membranes appeared healthy and natural, but attention was called to the bulging, pulseless brain, as indicating deeper trouble. A hollow needle was pushed into the central portion without result, and a second plunge made was followed by a like result. The aspect of the case was such that, on consultation, it was urged that another opening be made following the course of the line of fracture. This was done, and disclosed the brain membranes, as before, apparently healthy, but still unduly tense and full. Here, again, the aspirating needle did not reveal anything; though sanguine still of ultimately finding the seat of trouble, at my solicitation Dr. Clark consented to once more make an attempt, using a pointed grooved director which I had carried. This he employed, and pus welled up along the director. Over an ounce of pus flowed out through the crucial incision which the doctor then made through the intervening brain substance. The cavity was washed out with $\frac{1}{100}$ carbolic solution, and a drainage tube inserted. The effect on the pulse was instantaneous, as it rose at once to 78. Recovery followed without interruption, and within a few weeks the patient walked to my office to report, the cavity filled and wound closed.

The report of such cases as this of Drs. Bullard and Bradford are instructive as establishing the localization of lesions; and such cases strengthen the confidence and assurance of both the operators and their assistants for future work. I feel sure that they would in future be more ready to operate; and certainly, but for the experience with the case in the Boston City Hospital, it is not probable that the search for the abscesses in the case related would have been continued.

Only recently the boldness engendered bore fruit in an unexpected way. The writer was asked by Dr. O. Page to a consulta-

tion over a case under his charge in the German Hospital of this city. The patient was a lad, twelve years of age, who for three or four days had been off his food, moody, complaining of headache, photophobia, with constipation, vomiting and fever. The evening previous he fell out of bed in a convulsion, and when seen had been for twenty hours in an unconscious state, breathing stertorously, and with a slow pulse. Meningitis was the diagnosis made, tuberculosis excluded, from the history and previous knowledge of the boy. He was a wild chap, and the question arose, could it be of traumatic origin? though previous to the convulsion he had denied any blow or fall on the head. However, on examining the shaved head, a marked irregularity was detected at one spot over the left parietal bone, as though there were a distinct depression. In view of his condition, we determined to cut down to the bone, and, if there were the slightest indication of injury, proceed to trephine. No attempt to check the bleeding was made; but having denuded the bone, we could find nothing to warrant further procedure. The following day the lad was perfectly conscious, continued to improve, and made a good recovery. No trephining was done, but the intention to proceed with it, even on a mere chance of benefit, led to the local bleeding, which did undoubtedly good and changed the aspect of the case from one of fatal prognosis to recovery.—JOHN TRUMBULL, M.D., in *Boston Med. and Surg. Jour.*, Aug. 9, 1888.

Tic Douloureux of Seventeen Years' Duration Treated by Neurotomy.—DR. W. A. HOWE, Phelps, N. Y., reports the following case:

Mrs. T——, had been a constant sufferer for the past seventeen years from the most excruciating neuralgic pains. These pains would recur at intervals varying from a few minutes to several hours and were always experienced in those regions of the face supplied by the supra-orbital, intra-orbital and mental nerves. Their persistency all this time has occasionally been interrupted by some energetic plan of treatment; but such relief afforded by drugs proved of short duration, and she soon lapsed into as fearful a condition as before. I determined if her consent could be gained to resort to surgical measures. The treatment was begun on May 29, at which time the supra-orbital branch was operated upon. Its point of exit from the skull having been determined by the notch

through which it passed, fifteen minims of a four per cent solution of cocaine was injected over the nerve. One clean incision was then made, as near as possible along its course for somewhat over an inch. My dissection was carried down to the nerve which was at once exposed and divided at its distal end. I proceeded to follow the nerve in the direction of the notch, reaching which another division was made, enabling me to remove an inch of the nerve. No pathological changes presented themselves in or about the nerve. From that time on the patient enjoyed perfect freedom from pain in all parts supplied by that nerve.

Some twenty-three days later I performed a similar operation, at which time a portion of the mental branch of the inferior maxillary was excised. As in the former case, cocaine was injected and a single incision employed. Instead of finding the nerve normal, as before, there was a marked neuritis. This inflammation involved not only the connective tissue sheath but the nerve elements themselves and extended along the nerve as far as I was able to examine. Besides these pathological changes in the nerve itself there was also found a small abscess in contact with, though not adherent to the nerve. The neuritis directly under the abscess was more intense in character than that in adjacent parts of the nerve; which fact explains the extreme localized tenderness which the patient had experienced in that particular spot. This wound also healed by first intention, and the patient suffered no further paroxysms along the course of the resected nerve.

Three days later I excised a portion of the intra-orbital branch of the superior maxillary. Marked pathological changes were here seen corresponding in character and degree with those found in the mental nerve.

During the next four weeks the patient gave no indications of the recurrence of pain, but she grew stronger and better in every particular day by day. Suddenly she died of choleraic diarrhea. I fully appreciated the probabilities of a regeneration of the destroyed nerves. Yet considering the torture which she suffered, the freedom from danger of the operations, the perfect relief afforded her, even though it might have lasted but a few months, I can but believe in the expediency of such a plan of treatment for facial neuralgia of such an obstinate character.—*Med. Record*, August 18, 1888.

Gunshot Wound of the Brain, Presenting Interesting Features in Treatment and Result.—DR. S. EMORY LANPHEAR, records the following case:

Ed. F——, carpenter, age twenty six, was shot by pistol, the ball entering about one and one half inches to the right of the sagittal suture and about two inches posterior to the coronal suture. It emerged, or a portion of it, at the sagittal suture, cutting the superior longitudinal sinus. The hemorrhage was consequently profuse, and when I saw him first, some fifteen minutes after the accident, he was lying in a small room, with scarcely a spot upon the floor not covered with blood. He was pallid, limp and helpless but conscious and talkative. This was about 1 A.M. At 9 A.M., he was removed to the hospital, and a little while later was anesthetized and the wound opened. The ball was found to have split, one-half making its exit as described, the other lodging between the plates of the parietal. The two openings were made one by chiseling away the bone, and all broken-down brain tissue taken away to the amount of nearly two and one-half ounces, the portion removed being that which is usually believed to preside over motion in the lower extremity. There was considerable hemorrhage from a large branch of the meningeal artery, controlled by hemostatic forceps. The operation was done under a constant stream of pure water of the temperature of 120° F., and the wound dressed with borated cotton. The patient soon regained consciousness, but was, contrary to our expectations, paralyzed in the left arm only. In a day or two there were slight evidences of inflammatory trouble, and the leg became implicated in the paralysis, thus completing the hemiplegia. Save for this the case progressed favorably for a number of weeks. The wound did nicely, being dressed on the thirteenth day, the paralysis lessened though never quite disappearing; the incontinence of feces, present from the first, ceased, and everything looked hopeful, when he suddenly developed symptoms of cerebral abscess at the base of the left hemisphere; from this time he rapidly became worse and died. The autopsy showed the cerebrum on the right side (the injured one) in excellent condition; so far as any lesion here was concerned he was practically well. But a small fragment of the bullet, not to exceed the size of the head of a pin, had passed through the right hemisphere, pierced the falx cerebri a little above the corpus callosum, and lodged in the white matter just external to the left corpus

striatum. Here it had set up inflammation culminating in an abscess which ruptured into the lateral ventricle, broke down the septum lucidum and acted as the immediate cause of death.—*Kansas City Med. Index.*

PHYSIOLOGY.

BY WM. TOWNSEND PORTER, M. D., *Prof. of Physiology in the St. Louis Medical College.*

The Scientific Grants Committee of the British Medical Association publish in the *Brit. Med. Jour.* for Aug. 4, five papers embodying some of the work done under its auspices.

Report on Cultivation Experiments with Bacillus Lepræ.—DR. BEAVEN RAKE summarizes the results of four years' work:

1. At a tropical temperature and on the ordinary nutrient media I have failed to grow the bacillus lepræ.

2. In all animals yet examined I have failed to find any local growth or general dissemination of the bacillus after inoculation, whether beneath the skin, in the abdominal cavity, or in the anterior chamber. Feeding with leprous tissues has also given negative results.

3. I have found no growth of the bacillus lepræ when placed in putrid fluids or buried in the earth.

The Motor Functions of Certain Cranial and Cervical Nerves in the Monkey.—In the course of a number of experiments on the cranial and cervical nerves of the monkey, *macacus simicus*, Beevor and Horsley have observed several facts which do not harmonize with the views hitherto generally received. They consider entirely hypothetical the idea that the levator palati receives motor fibres from the facial through the superficial petrosal nerve. They have found that stimulation, under ether, of the peripheral end of the divided facial nerve in the internal auditory meatus failed to cause, even with the most powerful current, the slightest movement of the soft palate, although the face was thrown into violent spasm. The true motor nerve supply of the levator palati is, according to these observers, the eleventh nerve. When the peripheral end of this nerve was stimulated inside the skull, elevation

of the soft palate on the same side was invariably seen. The path by which the fibres from the eleventh nerve reach the palate is probably through the upper branch of the pharyngeal plexus.

It has also been held that the depressors of the hyoid bone receive their motor nerve supply from the hypoglossal through the descendens noni, but according to the author's observation, these muscles are supplied by the first and second cervical, and it is only when the hypoglossal is stimulated below the point where it is joined by the branch from the first cervical nerve that any movement is produced in the depressors of the hyoid.

The descendens noni, ordinarily regarded as a branch of the twelfth cranial, derives its motor fibres according to Beevor and Horsley, entirely from the first and second cervical nerves.

The Air of Coal Mines.—DR. T. G. NASMYTH concludes the report of an elaborate investigation into the air of coal mines and the health of miners as follows: Twenty years ago air was very bad in mines, ventilation was almost unknown, and the hours were very long. Nowadays the air is generally good, ventilation is efficiently carried on, and hours of work are short. The miner works hard while at his work, but he has short hours and many holidays. In tables of statistics, Dr. Nasmyth shows that phthisis, contrary to general opinion, is not a common disease amongst miners; his own every day experience for ten years in a large mining population supports these tables. He knows of no disease peculiar to miners, or any disease in excess existing among miners. The opinion of many other medical men practising among colliers coincides with his own. It is his opinion that the conditions connected with miners' occupation are as favorable to health as those in the occupation of any other workmen, and this opinion is borne out by the vital statistics quoted.

Morphological Changes that Occur in Human Blood During Coagulation.—PROFESSOR HAYCRAFT, in connection with DR. E. W. CARLIER, has investigated the morphological changes that occur in blood during coagulation. Blood is drawn from a finger tip, immersed in a tall cylindrical vessel of castor-oil. The blood so obtained comes into contact only with the tissues of the finger in the puncture, neither the surface of the skin, nor the air, nor any particle of dust, being permitted to contaminate it. By this method blood has been kept fluid in castor-oil for nearly an hour,

and by a modification of the method has been examined microscopically before and after coagulation. The white blood corpuscles, both finely and coarsely granular, remained globular as long as kept in the oil. When, by tilting the microscopic slide, the oil was allowed to flow away from them, and the blood touched the surface of the glass, they began to show active ameboid movements, and threads of fibrin appeared in numerous parts of the field. The ameboid movements continued long after coagulation had set in. This experiment showed that contact with an inert solid was the determining cause of the production both of fibrin and of the ameboid movements observed. Analogous methods gave similar results.

In principle all these methods are the same. In all cases the blood is surrounded by *fluid* of a surface tension different from its own, and which does not mix with it.

The experiments support Sir Joseph Lister's theory that blood does *not tend* to coagulate within the body, and that, when it clots in a cup or in contact with any solid matter, the clotting is brought about by the action of the solid itself on the blood. Of course, if the blood can be removed from the body and kept in a fluid state in oil, there is no reason to agree with Sir Astley Cooper that, within the body, the vitality of the vessels prevents its coagulation. The action of glass and other chemically inert solids upon the white corpuscles is in the nature of a mechanical stimulus.

Do White Blood Corpuscles Break Down During Coagulation?

The generally accepted theory, as propounded by A. Schmidt and others, is that coagulation is the direct result of death of the blood, especially that of the white corpuscles, which in dying produce a ferment which, acting on certain constituents of the blood-plasma, produces fibrin. Schmidt maintains that there are two kinds of corpuscles, one kind breaking down during coagulation, the other persisting. It is also claimed by this school that enormous numbers of colorless corpuscles are dissolved as soon as the blood is shed from an artery. Professor Haycraft and Dr. Carlier are certain of the following facts, namely, that some at least of both the fine and coarse varieties of white blood corpuscles are always found alive after coagulation, which occurs in their own blood never later than five to ten minutes after it has been shed. They have drawings of moving cells in blood which had clotted two days previously.

Although many experiments were performed by them, in no case were white corpuscles observed to break down within fifteen minutes, thus proving that the idea that some corpuscles break down at once on the shedding of the blood is not tenable.

Conclusion.—Solid matter mechanically stimulates the white corpuscles of the blood, leading to ameboid movements if the blood be not cooled. In any case, some metabolic change, associated with formation of fibrin, occurs in the white corpuscles, whereby they are lead to contribute to the production of fibrin. The stimulus in the case of exceptional cells may be so strong or so continued as eventually to lead to an apparent or real breaking-down, which occurs, however, only after, and sometimes long after, coagulation is complete.

The action of an inert solid on the blood-plates is much the same as its action on white blood corpuscles. It causes them to become sticky, run together, lose contour, and change their shape.

The Angular Gyrus, Superior Temporo-Sphenoidal Convolution, and the Occipital Lobe.—DR. SANGER BROWN gives in the *New York Med. Rec.* for Aug. 4th, an account of experiments made in conjunction with Professor Schafer, in the physiological laboratory of University College, London, and reported by them to the Royal Society.

Destruction of the angular gyrus on both sides of a monkey's brain was followed by no visual defect discoverable by the most careful tests.

This is in direct opposition to the statement of Ferrier and Yeo: "Complete extirpation of both angular gyri causes for a time total blindness succeeded by lasting visual defects in both eyes. Unilateral destruction of the cortex of the angular gyrus causes temporary abolition or impairment of vision in the opposite eye—not of a hemiopic character." Also Munk: "The angular gyrus is related to the sensibility or movements of the opposite eyeball.

Removal of the left occipital lobe (shown by post mortem to be complete) was followed by bilateral homonymous hemianopsia. Objects so placed that their images fell upon the left half of the retinae were not noticed. A raisin fixed to the end of a long stick held from behind, so the holder was not being observed, and then moved from right to left at a convenient distance from the monkey, was not noticed till it had

passed the mesial vertical plane, when it was instantly seized and eaten.

Removal of both occipital lobes at one operation resulted in total and persistent blindness. The animal could only find food by groping and smelling, and placed in a dark room gave no signs of perception when a bright light was flashed in its face. Hearing was very acute, and all the other senses besides vision appeared uninjured.

Ferrier and Yeo state that destruction of the superior temporo-sphenoidal convolution on both sides causes complete and permanent loss of hearing, without other sensory or motor defect. Hearing is not impaired by lesions of any other part of the lobe. To test these results the superior temporo-sphenoidal convolution on both sides was removed. In one monkey not a trace of the convolution was left, and in another the whole temporal lobe on both sides of the brain was taken away. All six, even immediately after the operation, as soon as sufficiently recovered from the anesthetic, reacted to slight sounds, such as the crumpling of dry paper, or the smacking of the lips. The two animals with the more extensive lesions were kept alive for several months, as were some of the others, but none at any time showed evidence of the impairment of the auditory faculties, or, indeed, of any of the special senses.

OBSTETRICS AND GYNECOLOGY.

Twin Pregnancy: Dead Fetus Carried to Full Term.—S. B. SNYDER was called July 14, 1886, to see a patient with symptoms threatening abortion at about five months. Under careful treatment these symptoms passed off, and labor set in Nov. 27. There was a head presentation and the woman was soon delivered of a small child. On tracing up the cord it was found that the membranes were still within the uterus. Kneading and compression of this organ soon caused the expulsion of the remaining contents of the uterus, in which was found a fetus, weighing less than one pound, enclosed in its membranes, perfectly preserved, evidently having died when the threatening of abortion took place.—*Phys. and Surg.*, March, 1888.

Artificial Cow's Milk.—DR. LEDENTU presented the following formula to the medical society of Trieste (Austria) as an exact

imitation of cow's milk. It has been found extremely useful in the treatment of infantile colics and true cholera infantum:

Take of

Dried egg albumen,	- - - -	150 parts.
Oil of sweet almonds,	- - - -	350 "
Milk sugar,	- - - -	400 "
Carbonate of sodium,	- - - -	4 "
Chloride of sodium,	- - - -	2 "
Neutral phosphate of lime,	- - - -	5 "
Water,	- - - -	10,000 "

Make an emulsion.—*Nat. Druggist*, April 1.

Supplementary Mammae.—S. A. BROWN reports three cases. The first was that of a half Cherokee and half mulatto girl delivered of first child in North Carolina in 1870. She had a supplementary mamma on each side, four inches above the principal gland and in line with it. Each was about three inches in diameter and had a nipple about the size and shape of the usual male nipple. Both secreted milk, and the child nursed from them. The second case was that of a woman in Sioux Falls, Dak., who was delivered of her first child June 10, 1886. She had a supplementary gland without a nipple in the middle of the right axilla. Inflammation and abscess occurred. In the third case the supernumerary gland was furnished with a nipple and was situated in the left axilla.—*Northwestern Lancet*, April 1, '88.

Retained Placenta—Retention of Urine for Five Days.—H. P. JOHNSON was called to a woman who had been delivered by a midwife five days before, and had passed no urine. Since she was perspiring freely, P. 72; F. 100° F. Abdomen distended; bladder reaching above the umbilicus. He drew off with the catheter about six quarts of urine. Examination showed the placenta in the vagina grasped by the os. Its removal was followed by a gush of most fetid blood and clots. The doctor washed out the uterus and vagina with carbolized water, and the woman made a rapid recovery without an unfavorable symptom. Dr. Johnson remarks very truly in conclusion: "The case proves that sometimes puerperal women will not die."—*Northwestern Lancet*, April 1.

Pouillet on the Intra-uterine Treatment of Metritis, Flexions, and Pelvic Inflammation.—DR. POULLET, of Lyons, believes that expectant treatment is perfectly useless in most of these diseases.

Active proceedings, which involve dilatation of the cervical canal, are not dangerous when thorough. The uterus readily absorbs poisonous germs, including those which naturally exist in the secretions of the endometrium, so that the grazing of its surface by a sound may cause serious complications. Accidents of this kind will not occur if the uterine cavity be washed out with a sublimate solution, or a cubic centimetre of creasoted glycerine, a good germicide, may be introduced. In cases of chronic endometritis Schröder and others have for many years been accustomed to dilate the os, scrape the uterine cavity, and disinfect; but the same authorities lay down a rule that scraping and dilatation should never be undertaken when there is evidence of parametritis. Dr. Poulet is of a contrary opinion. Not only are dilatation and scraping safe and valuable in parenchymatous metritis, but they are necessary, in his opinion, when the inflammatory processes have extended to the pelvic peritoneum and connective tissue. Particularly is treatment of this kind needed when the uterus is retroflexed or retroverted, and its fundus fixed by adhesions or by thick inflammatory deposit. From April 1, 1887, to February 1, 1888, Dr. Poulet has treated fifty-one cases of metritis or parametritis. Under anesthesia, the uterine cavity was mopped out, the endometrium scraped, and the uterus restored, when displaced, to its normal position. In one case the temperature rose to $102^{\circ}.2$, in none of the others did it exceed $100^{\circ}.2$. All recovered. In cases of pelvic abscess, especially the acute form following parturition or abortion, Dr. Poulet is particularly careful to wash out the uterine cavity with sublimate, injecting half a dram of creasoted glycerine, to dilate by introducing Hegar's bougies, to scrape the endometrium, and lastly, to swab the cavity with the same preparation of glycerine, before opening the abscess through the vaginal walls. [In all these cases the element of prolonged rest should be taken into account. It is clear that if the uterine cavity be interfered with, precautions must be taken lest any septic material gain admission into the uterine tissues through abrasions and lacerations, such as must necessarily be produced by dilation and scraping.—*Rep.*] *Lon. Med. Rec.*, March, 1888.

Landau on Cancer of the Uterus.—At a meeting of the Berlin Medical Association Dr. Landau described briefly eight cases, seven of cancrroid of the portio vaginalis and one of sarcoma of the

corpus uteri. The fact that four of the women were aged between 20 and 29 years proves that the disease of the portio vaginalis stands in no relation to age. Only one woman did not survive the operation, and two subsequently had a relapse and died—the one eighteen months and the other six months after the operation. The remaining five have hitherto had no relapse. As to the treatment of canceroid, the question lies between total extirpation and Schroeder's method of supravaginal extirpation of the portio vaginalis. Landau pronounces in favor of early total extirpation, not only because menstruation tends to further weaken the organism, but also because he has found that Schroeder's method is seldom suitable; for, as soon as the canceroid has descended towards the cervix, the moment for total extirpation of the corpus uteri has arrived. Abel, Landau's assistant, has made the discovery that in three cases of carcinoma of the portio vaginalis there was sarcomatous degeneration of the mucous membrane of the corpus uteri. Laparotomy has been generally abandoned as the first step to extirpation of the uterus, as being immediately dangerous to life and nearly always involving a relapse: hence Billroth's method of extirpation *per vaginam* was welcomed, by which the uterus was separated from its connections with the knife and the scissors, ligation and suture being used on its entire removal. But there were three objections to this course: (1) The operation involves considerable hemorrhage; (2) secondary hemorrhage is to be feared; (3) the ureters may very easily be injured either by the subsequent ligation of the lateral parts; (4) the operation is a very lengthy one, and absolutely impracticable in the many cases in which it is impossible to drag down the uterus. Therefore, the French (Richelot's) method of applying compressors was a decided gain. Here the uterus is separated from the bladder and the rectum, bleeding being at once stopped with the pincette; the finger is pushed to the base of the left and right broad ligaments, applying one or more clamps, and then the uterus is cut off without ligation. All is done in an incredibly short time, viz., from 15 to 20 minutes. The advantages of this method are: (1) there is the slightest possible hemorrhage; (2) secondary hemorrhage is guarded against; (3) the dangers of a long narcosis are avoided; and (4) there is nearly absolute certainty that a ureter will not be interfered with, which was formerly of very common occurrence. The after-treatment is simplicity itself. During the time (48

hours) the pincettes remain attached, and after they have been removed, nothing further is done to the patient. Healing follows without a check. Landau lost but one out of the eight cases, and this one woman got up during the night following the removal of the pincettes to get water. The next day peritonitic symptoms set in, indicating ileus. On the 9th day laparotomy was done, and it was found that the intestine was so sharply inflected as to be impermeable. The diagnosis of the initial stage of carcinoma is particularly difficult in the uterus, on account of the many complications. The structure of the diseased tissue must be studied from particles obtained by excision and abrasion. But, sometimes, benign affections (*e. g.* erosions) assume the appearance of cancer, so that even fully competent histologists may be deceived. Dr. Küster at the same meeting stated that he had done the operation, as described by Landau, in two cases, and had at first been charmed with its rapidity. But though he let the pincettes remain only twenty hours, which he considers ample, gangrene attacked the tissue held by the pincettes, and it was a long time before it could be got rid of. The thought of gangrene in the immediate neighborhood of the peritoneum was anything but assuring. In his second case something worse happened. The operation had been rather more difficult, but the pincettes were applied, certainly so as not to grasp the intestine. Soon symptoms of slight sepsis appeared and gradually increased. The patient died without a trace of peritonitis, but an intestinal loop near the field of operation had a gangrenous spot. This must have been produced by the heavy mass of iron resting on the intestinal loop for twenty hours. Not knowing how to avoid such a recurrence, Küster has determined to abandon the method, pleasant and easy as it is. Nor can he rely on a diagnosis from examination of particles obtained by abrasion. In doubtful cases he has found digital examination to answer well. The uterus having been split bilaterally, the whole cavity can be perfectly explored. If no carcinoma is found the portio vaginalis is stitched up, and healing follows without a check. Landau replied that he could not understand how sloughing from pressure of the intestine could occur unless there had been already a disease of the intestine; for the intestinal loop suspended by the mesentery is normally quite able to yield to pressure. If, on the other hand, peritonitis had arisen from sepsis, the meteorized intestine would certainly press against the pincettes. Hence Dr. Küster's mishaps must not be laid to the charge of the methods.—*Lon. Med. Rec.*

Polotebnoff on a Successful Case of Ovariectomy in a Girl, aged 9.—In the *Ejenedelnaia Klin. Gaz.*, No. 12, 1887, Dr. S. M. Polotebnoff, house-surgeon to Professor A. I. Lebedeff's obstetrical and gynecological clinic in St. Petersburg, details the very rare case of the daughter of a Russian colonel, aged 9, of average size, build, and nutrition, and dark complexion, who was admitted with headache, occasional abdominal pain, and a steadily increasing abdominal swelling, the symptoms being of about two years' standing. On examination, the greatest circumference of the abdomen (at a level a little above the navel) was found to measure 64 centimètres; the distance between the ensiform cartilage and pubes, 27.5 centimètres; that between the top of the tumor and pubes, 21 centimètres. The external genital parts were normal, but the vagina measured as many as 8 centimètres. The tumor was found to be globular, elastic, non-fluctuating, free from the uterus, and fairly freely movable from side to side, but only very slightly in a vertical direction. An ovarian cyst with a very long pedicle was diagnosed, and ovariectomy performed twenty-two days after the admission. The median incision, carried from the navel downwards, measured 7.5 centimètres. Having punctured the bulging out tumor with a trocar, and drawn off 1,950 cubic centimètres of fluid, the operator easily extracted the remaining solid portion of the cyst with his hand, introduced into the abdominal cavity, without extending the abdominal wound. The pedicle—which actually proved very long as well as broad, and which was attached somewhere high up behind the new growth—was split into two portions, each of which was ligatured apart and then divided above the ligatures, to be returned into the abdomen. The abdominal incision was closed with ten silk sutures, powdered with iodoform, and covered with a layer of iodoform-gauze and several layers of sublimatized wadding, all being secured by a special, very convenient knitted bandage used in Professor Lebedeff's clinic. Except some passing sickness shortly after the operation, and a slight rise of the temperature (37° 8 C., 100° F.,) the little patient's recovery went on most satisfactorily in all respects. The sutures were removed on the eleventh day, when the wound was found to be united *per primam*. On the twenty-first day the girl was allowed to get up. On the twenty-sixth she left the clinic quite well. The whole new growth (including the fluid) weighed 2,310 grammes; its solid portion alone 400 grammes. On being dissected, the tumor was found

to contain a tallow-like matter with short fair hairs, two or three osseous fragments, and several tooth-shaped enamel patches, scattered over the various parts of the dermoid cyst. [There is not a single word said about ovaries. To take the case as it is given, we would say that Dr. Polotebnoff's case may be that of laparotomy for a dermoid cyst of (possibly) a mesenteric origin, and not that of ovariectomy for an ovarian dermoid. Still, we hesitate to alter the title of our report in that sense, since—1, the author himself treats his case as an ovariectomy, beyond any doubt; and 2, Russian reporters—including such specialists as Dr. R. I. Riasentzeff (in the *Jurnal Aküsherstva*, etc., p. 394)—regard this rare case also as an ovarian one. At all events, an explanation from the author himself would be welcome. Assuming for the present that our doubts are irrelevant, we will agree with Dr. Polotebnoff that his case is decidedly the youngest where ovariectomy has been performed by a Russian surgeon. The next place is occupied by the case of a girl, aged 13, where an enormous cystoma of the right ovary has been successfully removed by Dr. Isääk G. Mandelstamm, of Odessa (the *Odessa Town Hospital's Reports for 1885*.) The case was conducted under all antiseptic precautions. The pedicle was ligatured and returned into the abdomen. The temperature oscillated between 38° and 37°.7 C. during the first two days after the operation, to become subsequently quite normal. The sutures were removed on the twelfth day, the wound healing *per primam*. The patient got up on the fifteenth day, and was discharged in excellent health on the thirty-second. According to Dr. V. A. Matvëeff's excellent monograph (*St. Petersburg Inaugural Dissertation*, 'On complete Ovariectomy in Russia,' 1886,) Dr. Mandelstamm's case was the youngest amidst 762 cases of Russian ovariectomies, operated upon up to April 1886. Two other cases of Matvëeff's collection referred to girls of 14, and three to those of 15. How rare, indeed, are cases of ovariectomy in childhood, one can see from the fact that Dr. Polotebnoff was able to gather only nine instances of the kind in the whole international literature—viz., those of B. Barker (two in girls of 7), Spencer Wells (of 8), H. Schwartz (of 4), Knowsley Thornton (of 7), Roemer (of 1 year 8 months), Alcott (of 3 years), Busch (of 2), Kidd (of 3). In the *London Medical Record*, June 1887, p. 247, Mr. Alban Doran adduces, besides, Neville's case (of 2 years, 11 months), Cupples's (of 8 years), and Chenoweth's (of 8.)—*Rep.*] *Lon. Med. Rec.*

OTOLOGY.

BY M. D. JONES, M. D.

Ten Cases of Removal of the Malleus.—By DR. STACKE, of Erfurt. The writer of this very interesting article, divides the indications for operating into two groups. The first is when there is caries of the malleus, and so a standing menace to the life of the patient. The second is for the purpose of restoring, or improving the hearing. Good surgery aids nature to get rid of dead or dying bone. By removing a carious hammer, free drainage is established often. "Conservative" surgery however will stand by, and still using powders and fluids, will see the patient die of brain trouble. The removal of the malleus, incus and Mt. under certain diseased conditions, and modified operations of the same nature for the improvement of the hearing in sclerosis of the middle ear, are no longer experiments but assured facts. Before operating on a case of sclerosis, fixation of the base of the stapes must be excluded as well as possible, or the operation will be in vain. The cases operated on by Dr. S. gave on the whole excellent results, and aural surgery can be said truly to have taken a new departure.—*Archiv. Ohrenheilkunde*, 26 Bd.

On the Function of the Cochlea.—By DRS. MOOS AND STEINBRUGGE. Under this title the authors defend their belief in Helmholtz's theory of the sensations of sound, and reply to a criticism made on the strength of the functional examination of a case of exfoliation of the upper turn and a half of the left cochlea. They point out that the examination of the case was not accurate enough, and consider it possible that membranous parts of the labyrinth, and their functions may to a certain degree be preserved after the exfoliation of the necrosed bone. During the slow exfoliation, new formations of bone may take place, and protect the soft tissues.—*Archiv. Otolology*, March, '88.

Otitis Media Hemorrhagica.—The case was that of a baby 9½ weeks old, reported by Dr. Barr. Four weeks previously the ear was discharging pus, and there was a large swelling of the neck just below the ear. The mother awoke at night to find the upper part of the child's dress saturated with blood. She thought at least a teacupful had been lost. The bleeding returned twice, but

was not so profuse. The recovery was good. Hemorrhage of the ear may be due to several causes, viz., polypi, otitis externa, granulations, etc., but is then only moderate. The explanation of the bleeding in this case may be made in several ways. The enlarged arterioles of the tympanic mucous membrane may be ruptured under the influence of the vacuum caused by closure of the Eustachian tube. Still in every case of otitis media, such a condition exists without hemorrhage following. A weakness of the coats of the blood vessels, such as we know to be associated with Bright's disease, may cause such a bleeding, but the youth of the patient here is against this idea. We may suppose a hemorrhagic tendency. As ophthalmologists recognize a form of retinal apoplexy in the young, due to such a predisposition, so this case may be one of simple tympanic apoplexy.—*Brit. Med. Jour.*, April 28, '88.

Differential Diagnosis of Peripheric and Central Diseases of the Ear.—By DR. ROOSA. The author summarizes a long article with the above title as follows: Determine the effects of noise upon the hearing power and sensibility of the patient. If noise increases or does not diminish the hearing power, the case is a peripheric trouble. It is central, if noise diminishes the hearing. If noise is painfully disagreeable, it points strongly to central disease of the ear. Observe if the patient hears the watch relatively as well as the voice. Those with lesions beyond the tympanum usually hear the voice out of all proportion to the tick of the watch.

Test aerial and bony conduction with tuning-fork. If the vibrations are heard longer and better through the bone, it is only exceptionally that the disease is not peripheric. If on the contrary, they be heard better through the air than through the bone, the disease is one of the labyrinth, or of the trunk of the nerve, or of the nerve centres.—*Med. News*, April 21, '88.

THE BRITISH MEDICAL ASSOCIATION, besides all the expenses of publication of its journal, amounting to over \$100,000 last year, spent \$30,000 for various uses, and had a balance in the treasury of \$13,000. Nearly all of this large revenue accrued from the journal itself.

SOCIETY PROCEEDINGS.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, May 1, 1888, DR. HOMAN in the Chair.

SOARING OF BIRDS.

Dr. Todd presented a buzzard's wing dissected. About a year ago he called attention to the soaring of birds (vid. COURIER, Dec. 1887, p. 562), and at that time presented a wing of a white pelican and showed how the terminal quills, five in number might be rotated by muscular action; thus explaining, as he thought, the peculiar power of these birds to soar, these quills having a twist suggesting the blade of a propellor. As the buzzard is the very prince of soaring birds, study of the structure of its wing promises a solution of the mystery of soaring flight. We find in this wing the same peculiarities as in the pelican's wing; the great terminal quills can be distinctly rotated so that when the wings are extended this movement might suffice to propel the bird in its sailing motion. *Dr. Todd* proceeded to demonstrate how one set of muscles turns the edge of these feathers downwards, while the other turns them in the opposite direction. These movements in life will escape the closest observation, unless they are especially looked for by the aid of a glass.

Dr. Barclay asked if that is the only action of those muscles?

Dr. Todd answered that they have other actions. There are very few muscles in the arm to which the wing corresponds, which have a single action only.

OTITIS MEDIA.

He then presented several sections of the temporal bone which illustrated the subject of the paper which he was about to read; (vid. p. 419) and then added that some two years ago he exhibited to the society a part of a labyrinth necrosed in the course

of a similar disease in a girl 18 years old. There had been extensive suppuration of the ear, attended with complete unilateral facial paralysis. The patient had this total paralysis for months. The constant current was applied occasionally rather for her encouragement, when presently, muscular reaction began to appear; then the electrical treatment was regularly followed so that finally she gained such control of the muscles, that the paresis was noticeable only when she smiled.

Dr. Post asked if he had noticed that this occurs oftenest in the so-called strumous diathesis?

Dr. Todd said it did not seem to him that that plays much part. The last patient was attacked after a very severe case of typhoid fever. The girl probably was strumous. The case was neglected, and the trouble went on to extensive necrosis.

Dr. Post said that at one time he had the misfortune to have charge of a similar case, and the patient was of the strumous diathesis to a very marked degree. The patient, a small child, was brought to him with a keratitis, which is prone to appear in children of the strumous diathesis. Later on she appeared with an otitis media purulenta, the bone was exposed, and facial paralysis occurred; but there was also disease in the bones throughout the pelvis. A surgeon in this city operated on her for disease of the bones of the pelvis, and afterwards she was bed-ridden, and finally died from this strumous condition.

Dr. Mulhall said that he had had under his charge two cases in which the final outcome was pulmonary tuberculosis, while the initial was a chronic purulent middle ear discharge. The first case came under his care some six or seven years ago. He had already suffered for three years from a profuse discharge from the right ear, and the bare bone could be felt in the middle ear. He came to Dr. Mulhall on account of a cough and hoarseness. On examination of the larynx, it appeared to be a typical case of laryngitis tuberculosa, but after six months of very careful local and general treatment this patient gained some thirty pounds in weight, and his cough and hoarseness disappeared entirely. Dr. Mulhall was not able to discover anything the matter with his lungs. Some two years afterward Dr. Mulhall was called to see the same man at St. John's hospital. He had facial paralysis, a stinking discharge from the ear; laryngitis tuberculosa and the sounds of an excavation at the left apex of the lung; in other words he was in the last

stages of phthisis. There was no strumous history in his family, no tubercular history, and he called the doctor's attention to the fact that his larynx and lungs got sore after the ear trouble, and he concluded that the ear trouble caused the other troubles. That was one case. Another occurred at the Alexian Brothers' Hospital. A man had a discharge from his right ear, a very stinking discharge from the temporal bone, a caries of the ear and signs of phthisis at both apices. This patient had been suffering for quite a time, two or three years, with a discharge from his right ear before his general health began to suffer, before he had to give up his work. His right lung became affected about six months ago. Then he began to cough and lose weight and he was brought to the hospital in the last stages. Careful questioning elicited from him the fact that the ear trouble was probably the initial stage of the final catastrophe. We have the post mortem specimen. We found caries of the temporal bone. There was also tubercular meningitis. The question occurred why should not the germs of tuberculosis find an entrance through the ear trouble and thus infect the general system.

Dr. Barclay reported two analogous cases (vid. Oct. COURIER, p. 298.) He said it had occurred to him that perhaps in the latter case the more frequent syringing of the ear which the patient indulged in through the last two weeks before his facial paralysis developed, together with his failing to dry the ear afterward and to close it with a cotton wool wad, had so reduced the temperature in the middle ear that an inflammation of the facial nerve took place. This nerve may have been exposed in his middle ear. There was nothing else to account for it. If there was necrosis there, there was no evidence whatever of it, and Dr. Barclay gave it as his opinion that there was no actual ear disease to account for this disturbance. In regard to the structure of the Fallopian canal it is well known that just above the foramen ovale there is an opening in this canal where blood vessels pass through to the tympanum; there is also a connection between the cavity containing the belly of the stapedius muscle, and the facial nerve. Any inflammation in the middle ear may travel through this channel even where the Fallopian canal is normal; and may follow the tendon of this muscle and enter the Fallopian canal. In one case in which Dr. Todd stated that the facial nerve had lost its function, it is bare possible that the inflammation may have traveled down this channel to

the facial nerve. Cases of necrosis of the Fallopian canal have been reported where the canal has been entirely eaten away by the necrotic process and the facial nerve still left in full performance of its function. In the Fallopian canal there is a lymph sac, supposed to be a communication between the brain and this canal, through which inflammation may extend to the brain. The cases which the doctor has spoken of and those of which he had read and seen, all ought to afford encouragement to any one who is called upon to treat them. The prognosis is fair. There is one condition only in which the prognosis is bad, and that is where there has been a necrosis of the Fallopian canal and destruction of the facial nerve. Those cases are not encouraging. In a great many cases of chronic purulent middle ear disease in which condition we more frequently find facial paralysis, the paralysis usually occurs with an exacerbation of the disease. An inflammation is excited in this canal and in the sheath of the nerve, causing a secretion, producing pressure on the nerve, thus inducing paralysis. This paralysis disappears with the absorption of the secretion, and consequent removal of the pressure. The Fallopian canal begins to form at the third month of fetal life. It is not complete until after birth.

Dr. Fry remarked on the importance of determining in acute paralysis of the face where the trouble is located. We all know that so far as the muscles are concerned, the electrical reaction, etc., we can not differentiate a paralysis of the facial nerve that has resulted from a lesion anywhere below its nucleus or its origin, and yet it is very important in making the prognosis, which to the patient is often a very considerable item; it is something they want to know about immediately. It is a very important matter to determine where in the course of the seventh nerve, the facial nerve, the lesion is. He had seen a number of cases, where there had been considerable earache with no other evidence of any trouble in the ear; and in one case then under treatment, there was tenderness in front of the ear. The earache in this case persisted for a couple of days. The paralysis of the face was getting better. It had lasted something like four or five months. In this case he thought it possible, at first, that the trouble with the seventh nerve was in the aqueductus Fallopii; from the fact that the pain ceased there so soon and that there was a painful spot in front of the ear. He afterwards concluded that the trouble was all outside

the stylo-mastoid foramen, but was guarded in his prognosis until he saw what was going to be the result. Now the question was whether it would be possible to determine whether there was enough inflammation of the tympanum to produce an affection of the nerve somewhere in the aqueductus Fallopii; or if any examination we could make would satisfy us that the trouble was in the aqueductus Fallopii and not after the nerve had left the stylo-mastoid foramen. During the last week he had been looking over Gowers' new work on diseases of the nervous system, and finds that it is the received belief that the nerve does become affected from an inflammation in the aqueductus Fallopii; that is conveyed by this canal by means of the ways that Dr. Barclay has just mentioned. As Dr. Todd had suggested he also thinks that this trouble is apt to be overlooked and that certain cases of paralysis of the face are thought to be simply peripheral, that is to be due to an affection of the nerve beyond the stylo-mastoid foramen, when really the trouble is above that point.

Dr. Barclay asked whether the gentlemen agreed with him in the opinion that the cause of the facial paralysis in the case reported was not dependent on actual ear disease?

Dr. Fry said he thought Dr. Barclay's explanation was probably correct, that is, that there had been trouble with the facial nerve in the aqueductus Fallopii. There might have been only a slight inflammatory condition of the lining membrane of the tympanum that extended along some of these possible ways that have been mentioned. The fact mentioned that the orbicularis nerve was paralyzed would tend to confirm this view.

Dr. Barclay stated that the paralysis of the orbicularis was not total: the patient could partially cover the cornea, but not completely.

Dr. Fry remarked that if the orbicularis had escaped altogether, we should be apt to attribute the paralysis to a lesion higher up, beyond the nuclear origin of the nerve, but the fact that it was somewhat involved would lead us to believe that it was a sub-auricular inflammation.

Dr. Todd said with regard to the point made by Dr. Post and Dr. Mulhall in regard to the strumous nature of the patients affected, it seemed to him entirely possible. Phthisis and diseases of the ear have an intimate connection; purulent matters retained in the tympanum or mastoid cells may infect the system. It is now

looked upon as an important point in surgery to remove these for fear the system may be affected; and in regard to the invasion of germs from the ear, that is well illustrated in the fact that we may have deep abscess in the brain consequent upon chronic aural disease. The case which Dr. Barclay reported of the patient who had paralysis without any appreciable disease of the ear is an interesting one. It is supposable that the ear became chilled, and that there was a rheumatic affection of the nerve sheath as a result. With regard to what Dr. Fry has said about the determination of the site of nerve trouble in facial paralysis, he would suppose that the nuclear or central disease of the facial nerve might possibly be determined by other nerve troubles. He would hardly think that the facial nucleus of the brain could be affected without some other nerve centres being affected.

Dr. Fry asked whether in a case of facial paralysis an examination of the ear could be made to determine the probability of the paralysis being due to trouble in the Fallopian tube?

Dr. Todd said he could not conceive of there being any disease of the nerve in its course through the Fallopian canal without some history of ear trouble. Even in the case which Dr. Barclay had cited, where there was no general ear trouble, the man had been syringing his ear a great deal, and had had external otitis: the Fallopian canal might be invaded in that way.

Stated meeting June 12, 1888, DR. STEELE in the chair.

LAPAROTOMIES.

Dr. Tuholske reported two cases from a number of laparotomies made during the last three months. He exhibited a tumor removed from a young woman, 24 years of age, on the preceding Sunday; She was married and had one child, and had been under the care of Dr. Engelmann at the Polyclinic some two years ago. The tumor was diagnosed at that time and the patient received some treatment and left the city. She returned about a week ago. She was very much emaciated; exceedingly delicate in health; her appetite had fairly left her: she had reflex vomiting a great deal. Examining her under chloroform, a diagnosis was made which was fully proved at the operation, viz., a fibro-cystic tumor of the uterus, slightly movable, reaching beyond the umbilicus, firm, elastic; the uterus with the vagina pulled up high with it so the os

could not be reached; and a little, round, pyriform swelling just above the umbilicus, somewhat movable with the tumor was diagnosed as the uterus, bulging into the vagina, until the vagina allowed the introduction of three fingers: a well defined tumor could be felt. This was four days before the operation, and the woman vomited the next day more than she had before the administration of the chloroform, and was barely able to take any food; and it was a question whether it would not be better to wait and get her in better condition. But her history showed that she was getting in a worse condition all the time, and the vomiting would probably be relieved, if at all, by the removal of the tumor, so he decided to operate on Sunday morning. She was very weak; her pulse was 125 and there was a great deal of difficulty to keep her alive during the operation. Injections of brandy had to be resorted to from the first ten minutes. The incision extended from the umbilicus to the pubes. The position of the bladder was peculiar. Dr. Tuholske had said to those present that they would find the bladder drawn up high above the tumor, for first of all, the catheter used in emptying the bladder before making the incision had to be passed vertically upwards, and it was with difficulty that the bladder was emptied. On making the incision through the thin parietes, the bladder was discovered in the lower half of the incision. The tumor readily came into view, the uterus being situated higher than the umbilicus on the right side. Passing his hand into the belly around the tumor he found no pedicle. There was no possibility of removing the tumor bodily from the cavity. The only way open was enucleation. Without losing time he circumsised the tumor just above the bladder, cutting everywhere through the peritoneum, and then proceeding to push the tumor off of the denser peritoneum at the base of the tumor. This was a difficult matter. Many double ligatures had to be applied where there were large veins, some as large as goose quills. Finally everything was dissected from the tumor but the vagina by which it was held. He then put a clamp around the upper end of the vagina, including just the lower half of the neck of the uterus, and cut off the tumor. The loss of blood was barely to be taken into account. The removal of the tumor occupied fifty-five minutes—spent considerable time in dressing the wound and the stumps. Upon one side where the tumor was pulled off, the peritoneum was torn off—the left lateral pelvic wall. In the stump of the vagina and

uterus he ligatured the arteries and then covered the stump with peritoneum, sewing it up, peritoneum to peritoneum. He cleansed the cavity thoroughly, and introduced between the vagina and bladder and between the bladder and rectum a tampon of absorbent gauze with some iodoform sprinkled on it, leaving the cavity absolutely dry; closed it up and put the woman to bed. At noon her temperature was sub-normal; her pulse 136°. During the afternoon he gave her some ice pills and a little brandy; and, as she was very restless, a hypodermic injection, one-sixth of a grain of morphine was given. At six o'clock in the evening her condition was much the same; at ten o'clock she was about the same, but she died towards morning, at about five o'clock, probably from collapse, although he was somewhat astonished at the collapse occurring at that time, because she appeared to react; but, as stated, she was a very delicate woman, and it was a question when he began to operate whether she would come off the table alive.

Another case that he had seen during the last few weeks was that of a woman about 36 years of age, who had been suffering for over a year with some disturbance of her abdomen; she had had a good deal of vomiting and had been under the care of a good many physicians. Pregnancy had been suspected by two or three. She came under Dr. Tuholske's care a week or ten days before he operated on her. She was a woman of easy virtue. Dr. T. did not know that she had any children. He could not get any very satisfactory history. He examined her and found a roomy vagina, with a uterus in good position, freely movable, and a tumor in the abdomen, tense, firm and utterly immovable. A week previous to the examination she had suffered intensely, had had high fever and vomiting and great tympanitis. She described three or four attacks of pain of the same character. Dr. Tuholske's assistant saw her and thought she had a little peritonitis; she had got nearly or quite over this when Dr. T. examined her. This tumor was so tense that the question arose whether it was a fluid tumor or not. He diagnosed it as a dermoid tumor on the left lateral ligament, which diagnosis was not confirmed by the operation. On making an incision from the umbilicus downward he came upon what looked like a cyst wall, but it was impossible at any place between the pubes and umbilicus to sever the peritoneum from the tumor. The two had united so thoroughly that they had become one. He cut the tumor wide open, and removed the contents, probably a

gallon of thickish, reddish white looking fluid. He turned her on her side and allowed it to escape, and then put in his hand and found there a number of roundish, soft cysts that felt like convolutions of the intestine. They were cysts coming from the outer large cyst wall; there were probably hundreds of these cysts containing the same kind of fluid. Thinking he might possibly succeed by following Sir Spencer Wells' plan of putting the hand into the abdomen, seizing and everting the cyst wall, he tried this, but it was uniformly fixed everywhere, so there was nothing left to do but to remove all the cysts possible, wash out the cavity thoroughly and sew it up. He filled up the cyst with antiseptic gauze, with some iodoform, and put on the ordinary dressing. Very little fluid formed in the cavity after that; two days afterwards he removed the tampon and found her in good condition; he wiped out the cyst cavity with pure carbolic acid. A few days afterward he found the cavity had shrunken up, and in ten days it was only comparatively a narrow strip of gauze that he could put into the cavity. The whole thing healed without any disturbance whatever, and 18 days afterwards the woman left the hospital well with the exception of a small fistulous track leading from the opening into some part of the cyst. He believes she is just as well as if he had succeeded in removing the cyst.

Dr. Todd asked if he understood *Dr. Tuholske* correctly as saying that he wiped out the cavity with pure carbolic acid?

Dr. Tuholske.—Yes, sir; 98 per cent.

DR. E. WILLIAMS, of Cincinnati, one of the ablest and most successful of the specialists in ophthalmology, has just died, after a period of many months of gradually failing power. He was an admirable lecturer, a genial acquaintance, a true friend, a gentleman and a scholar in the best sense of those words. The profession of Cincinnati and of the country have lost a strong man from their ranks.

BELLEVUE HOSPITAL, New York, has received a gift from Mrs. R. H. L. Townsend of a handsome chapel and library.

OBITUARY.

DRS. L. LOISEL PAPIN AND B. J. PRIMM.—The following resolutions were passed Sept. 8, 1888, by the St. Louis Medical College Alumni Association on the death of Drs. Primm and Papin.

WHEREAS, We have lost by death one of our number, Dr. L. Loisel Papin.

Be it resolved, That the Alumni Association of the St. Louis Medical College hereby express the sorrow of its members in the loss of one of the youngest, most promising and pleasing of their number.

Be it further resolved, That the Association extends its deepest sympathy to the relations of the departed.

Be it further resolved, That the above form a part of the records of the Association; also that a copy be furnished the medical press for publication.

GREENFIELD SLUDER.

G. S. MILLER.

M. C. MURRAY.

Committee.

St. Louis, Sept. 8, 1888.

WHEREAS, The invisible hand of death has again fallen upon us and borne from our midst a comrade, one whose brief but brilliant career was full of accomplishments and an earnest of greater success in the future; one whose graces of character had won our esteem, whose brilliancy of intellect compelled our admiration, our friend and fellow alumnus Benjamin J. Primm, and whereas, we desire to express our sorrow at his loss, and our sympathy with his family in their bereavement.

Therefore be it resolved, That in him our profession mourns an earnest, successful worker, whose example was an incentive to better effort, and whose success and promise was its pride. That this association has lost a valued and efficient member, and that personally we have lost a friend to whom we could ever turn with confidence for counsel or encouragement.

Resolved, That we extend our heartfelt sympathy to his family, the shadow of whose sorrow has fallen on us also.

Resolved, That these resolutions be spread upon the records of this association, that a copy of them be sent to the family of the deceased, and that they be printed in the medical press.

J. FRIEDMAN

J. B. SHAPLEIGH.

GEORGE HOMAN.

Committee.

St. Louis, Sept. 8, 1888.

Action of the Faculty of the St. Louis Medical College on the death of Professor Primm, M. D., Professor of Anatomy, the following resolutions from the committee appointed for the purpose were adopted:

Resolved, That the death of our colleague, Prof. Benjamin J. Primm, M. D., in the prime of his life, deprives this college of one of its most useful members. In his short career as a teacher, he had attained to remarkable proficiency in his chair, which, with a peculiar aptitude for imparting instruction, redounded to his own reputation, and gave results eminently satisfactory to the college.

Resolved, That as a physician, he was highly esteemed and respected by his professional brethren, not only for the noble virtues which actuated him in his association with suffering humanity, but for his untiring industry in promoting the advance of medical science.

Resolved, That as a man he endeared himself to the profession and the community by his kindly disposition, and the entire unselfishness of his nature; and inspired a confidence commensurate with the highest probity and honor.

Resolved, That we shall always hold his memory dear; and as we realize our own great loss, we can turn to those upon whom the affliction falls most heavily, and offer our sincere sympathy in their bereavement.

Resolved, That these resolutions be entered upon the records of the Faculty, and a copy sent to the family of the deceased, and published in the medical journals of the city.

PROF. E. H. GREGORY, M.D.

PROF. H. H. MUDD, M.D.

PROF. W. E. FISCHER, M.D.

PROF. J. S. B. ALLEYNE, M.D.

Committee.

ST. LOUIS COURIER OF MEDICINE.

VOL. XX.

DECEMBER, 1888.

No. 6.

ORIGINAL ARTICLES.

HOW MICRO-ORGANISMS ENTER THE BODY.

BY GEO. N. KREIDER, A. B., M.D., SPRINGFIELD, ILL.

THE gross facts relating to the causation of most diseases by micro-organisms may be declared proven; but many problems concerning how germs enter the human body still remain which require careful study. Accurate observations made in a large number of clinical cases are necessary for the solution of these problems. In this paper I wish to relate some of my own observations, and to give a short résumé of current views on the subject. The importance of this matter is not to be underestimated. If tuberculosis, cancer, or indeed any disease is transmitted by organisms in a way which, though unknown at present, can finally be discovered by patient research, and if their entrance can be thereby more certainly hindered, it is worthy of the best efforts to consider, and if possible determine it.

Micro-organisms enter the body.

- I. By the skin.
 - a.* Lesions of the skin.
 - b.* Openings of the sweat pores or sebaceous ducts.
 - c.* By the sides of the hairs.
- II. By the mucous membrane.
 - a.* Lesions of the membrane.
 - b.* Openings of the ducts or follicles.
 - c.* Pockets, sulci, or folds.

III. Localized infection in a manner yet unknown, and giving rise to such diseases as idiopathic meningitis, osteo-myelitis, etc.

IV. Universal infection in a manner yet unknown, but giving rise to hereditary transmissible disease, as syphilis, tuberculosis, splenic fever.¹

The severity of the infection varies :

I. With the condition of the body as regards idiosyncrasy or strength, or weakness.

II. The amount of infecting material which gains entrance.

III. The character of the infecting material.

IV. The tissue which it penetrates and its location.

Although the entrance of material capable of giving rise to local and systemic disturbance by lesions of the skin has been long appreciated, it has remained for the present generation to determine how the disturbance is brought about, to demonstrate the importance of a sound epithelial covering, and the great dangers of its abrasion or puncture. Some of the ordinary means by which the human body is affected and coming under this first division are the numerous instances in which physicians have contracted syphilis and other diseases by reason of an abrasion or hang nail fissure existing on the examining digit. To show that we, as physicians, can not exercise too great care in protecting ourselves, it may be well to mention the case of the late Dr. Edouard Pritzl, first assistant to Prof. Carl Braun in the obstetric wards at Vienna, and one of the most accomplished and successful instructors in the General Hospital. He was a thorough believer in antiseptic midwifery, and yet, notwithstanding the use of all the usual precautions, he contracted septicemia by examining a case of puerperal fever just brought into the wards, and died from the resulting pneumonia. I have seen cases of erysipelas on the tip of the nose caused by an abrasion made by the dirty finger nail when picking it, and the consequent entrance of dangerous germs. An interesting case coming under this head is that of Peter Casserleigh, æt. 42, a veteran of the late war. At Chickamauga, Sept. 18, 1863, he

¹Marchand, Virchow's Archives, Band 109, 1887.

received three Minié balls in the right leg. The one which entered the hip and disorganized the joint, although extensively probed for, was not found by the surgeons, and remained in the tissues without giving trouble for a number of years. Partial use of the right limb was obtained, but on account of the anchylosed joint and shortening, a varicose condition was set up in the veins of the other leg which finally resulted in an ulcer of considerable dimensions, from which pus flowed freely. After the formation of the ulcer, the bullet began to give trouble, swelling and redness developed, and when it was extracted 24 years after entering, it was found surrounded by purulent matter. Thus a lesion on the other limb gave entrance to germs which, finding the place of minor resistance at the site of the bullet easily gave rise to a suppurating center. This was a veritable metastasis which used to bother our fathers so much, but which is now easily explained. Another interesting case is that of Mr. S. P. Bartlett, Fish Commissioner of Illinois, who consulted me in Aug. 1887, for an acute and very painful swelling on the side of his neck which was giving him intense pain. It was opened freely and the interior swabbed out with pure carbolic acid. No pain was present after this treatment, although it was several days in healing. Upon his inquiring as to the nature of the swelling I undertook to give him a short explanation of the modern views of infection, and told him that by some means he had suffered from an invasion of micro-organisms. Some of the disorganized material was placed under an immersion lens and the germs were demonstrated. I also stated that it was indifferent whether we called this swollen and painful part a boil or carbuncle, since these were virtually obsolete terms, and the treatment was the same, viz., to evacuate the germs and destroyed tissue as well as possible, and thoroughly disinfect the seat of the trouble. I confessed my ignorance as to how and where he suffered this invasion, but in a few days on his return from the Mississippi bottom he gave me the following interesting history. The season of 1887 was extremely dry, and the sloughs and small streams along the river evaporating left millions of fish to putrefy in the sun. Of course an abundance of

flies were present also, and one of them lighting on the neck of my patient was crushed there by a stroke of his hand. By this act some of the germs coming from the putrefying fish through the medium of the fly were rubbed into the open mouths of the ducts and along the hairs, and the poisoning resulted. Mr. B., also told me that two of his employes were similarly affected. One crushed the fly along his neck for some distance, and a half inch in breath. A second crushed the fly on his arm. The poisoning resulting from these extensive infections coincided exactly with the extent of the crushing. The tissue sloughed out, and the men nearly lost their lives. They were treated by the old method of poulticing. No worse application can be made in such cases than the poultice as ordinarily made up. I never employ the poultice now. Fine cloths wrung out in hot antiseptic solution, and frequently applied will accomplish more in one hour than the ordinary poultice of flaxseed or bread and milk will in a day. A still better means of penetrating the tissue and neutralizing the poison is by turning the steam spray of an antiseptic solution on the part as recently advocated by Verneuil and used by him with such brilliant results. The possibility of inoculation by the medium of flies, as here related, has been recognized for some time. Spillman and Haushalter (communication rendu a l'Acad. des Sciences, Paris, 1887) found that house flies confined in a room with a tuberculous patient contained tubercle bacilli in their digestive organs and excrement, evidently taken in from the sputa which they had consumed. It is easy to see how a transfer of these bacilli can be made from them to the human being. Dr. John H. Rauch, the able Secretary of the Illinois State Board of Health, informs me that in 1878, during the yellow fever epidemic at Cairo, Ill., he had undoubted proof of the transfer of yellow fever by the medium of the mosquito.

I am in the habit myself of taking as much precaution in the handing of tuberculous sputa as with a typhoid stool, and believe such practice should be universal. Great care should be taken in cleansing the receptacles of tuberculous sputa, since numerous observations have been made of direct inoculation of tuberculosis through a fresh wound or abrasions on a healthy person. I have seen one case of glanders infected from a horse

in a similar manner, viz., by abrasion of the skin of the hand while handling. Turning now to the second division of our subject, the entrance of germs by the mucous membrane, much the same might be said under *alpha* as under this head in the first division. A long recognized means of infection are those of a sexual origin about which I need not speak particularly. The introduction of germs to the mucous membrane of the vagina and uterus by unclean hands or instruments has been demonstrated, and thanks to modern teachings its occurrence is now rare. There is one point which I wish to make here. Some scoff at the use of antiseptic precautions in the vagina and uterus during the lying-in period said that the antiseptic treatment of these organs would soon be carried so far that it would be necessary to immerse the male organ in an antiseptic solution before sexual congress. This remark made as a joke has more in it than at first appears. Who of us has not seen male organs free from actual disease, but so filthy that they must certainly harbor disease causing germs. Inserted into a cavity so favorable for the growth of germs as is the vagina, may not many of the diseases so common to the female genital organs in the lower classes be due to this cause. Will not our efforts at treating these cases with antiseptic injections be useless unless we pay attention to this prime factor in their causation?

Many cases of middle ear disease are undoubtedly caused by an invasion of micro-organisms through the eustachian tube, and having their first growth in the nasal passages. An important point in the treatment of these dangerous affections is to disinfect the nose as well as the ear. Similarly it is very important to keep the mouth and nose in an antiseptic condition during typhoid fever, measles and scarlatina—to say nothing of diphtheria where it is all important. This is a subject to which I am sure too little attention is ordinarily paid, and care in this particular point will prevent many cases of suppuration of the middle ear and of the parotid gland.

Favorite points for the lodgement of germs are the crypts of the tonsils, which, by reason of the anatomy of the gland are particularly adapted to their growth. An English writer has

recently affirmed that the germs of diphtheria can lie dormant or grow slowly in these crypts for months, and that repeated attacks of the disease are explained by supposing an acute grafted on the chronic process. Persons in whose tonsils these enlarged and foul crypts filled with germs exist are kept by them in a low state of vitality for years. Trimming of the tonsils by the guillotine drains and empties these crypts, and causes an improvement in the health almost beyond comprehension. When the tonsils are not large enough for trimming, I have disinfected the crypts by passing into them a probe coated with equal parts of iodine and carbolic acid. So-called strumous glands in the neck I have found are sometimes due to the entrance of irritating material through the tonsils. A case illustrating this is Mrs. K., aged 25, who came with enlarged glands on both sides of the neck. The crypts of the tonsils were filled with foul material. The tonsil on the right side being enlarged, was removed. The glands on this side rapidly diminished in size, being influenced, I am sure, more by this procedure than by the galvanic current which was also applied, since the glands on the other side, although similarly treated with electricity remained almost stationary. The teeth and gums are also favorable structures for the entrance of germs, and the practitioner should not fail to have all foul or suppurating gum margins as well as decaying cavities thoroughly cleansed. No part of the body presents such a favorable site for the growth of germs as the stomach and intestinal tract, and in no part is the growth so disastrous. One half the children born, die before the fifth year, and mostly from gastro-intestinal disorders. The remarkable antifermentative property of the gastric juice, bile and accumulated gland secretions of the intestine prevent a great deal of disturbance. But let a fermentative action be once established; and how difficult it is to overcome it! This can be easily be understood when we consider the structure of the alimentary tract. Its follicles folds and lacunæ are peculiarly, adapted to the growth of germs, and affords them a safe residence. When the micro-organisms are of a virulent character, as in typhoid fever, dysentery, etc., they cause a sloughing of the glands which they have invaded; and if the patient survives

this process, the duration of the disease is comparatively short. But a less virulent germ gains a residence in the bowel or intestine, and a chronic diarrhea or dysentery is set up, which may last through a series of years. Certain germs seem to thrive in acid media, and thus find their best growth in the stomach; others pass on to the small bowel and there find a more or less alkaline fluid in which they can increase, causing typhoid fever, diarrhea, etc. Still another group thrive in the fluid peculiar to the large bowel and cause dysentery. Let some of these be now carried to the liver or spleen in sufficient quantity and an abscess results, giving another example of metastasis. We are now certain that tuberculosis and other diseases can be admitted to the organism by the alimentary tract.

The lungs and pleural cavities are favorite seats of the so-called metastasis of diseases, but the great majority of the germs gaining entrance to the respiratory organs are carried by the inhaled air. We have been in the habit of saying that tuberculosis is necessarily due to heredity, and many persons have suffered through life both mentally and financially because of this mistaken teaching. Unless one of the parents is suffering from an active tubercular process at the time of conception or birth, I believe that the child is in little danger. The numerous instances in which children of parents subsequently tuberculous have survived to an old age are proof enough of this statement; but we have still another proof in the fact that in a large percentage of cases no trace of tuberculous ancestry can be found. I firmly believe tuberculosis is infectious, and that isolation of consumptives and disinfection of their discharges are imperative, as I have already stated. The late Dr. Austin Flint preceded his time in declaring pneumonia to be a fever with its manifestation in the lungs. We have now distinguished its coccus and proven the truth of his statement. A corresponding change in the treatment must certainly occur with the change in our ideas of the pathology of the disease. As already stated, the middle ear is very likely to suffer from invasions of micro-organisms which in nearly every instance have their first growth in the naso-pharynx. Thanks to the antiseptic treatment of these affections, they are no longer so dangerous

as formerly. In many cases, however, the germs penetrate the mastoid cells and the brain, itself giving rise to pus-centers which are only to be relieved by the trephine.

Passing now to the third and fourth divisions of our subject, we find here our greatest difficulty. To determine how the germs, causing idiopathic meningitis and osteo-myelitis or measles, scarlet fever, etc., gain entrance, is often impossible with our present knowledge. The germ of measles exerts its first visible influence on the mucous membrane of the respiratory passages, and possibly this is the place where the germs enter the organism. If this be true, it is possible that a filtering inhaler may be used to good advantage on those children of a family who are necessarily exposed but not yet poisoned with the germs. That disease can be transmitted from parent to offspring is beyond dispute, but just how it is difficult to determine, since there is a total absence of continuity between the maternal and fetal blood-vessels. This subject engaged the attention of the eminent pathologists Birch-Hirschfeld and Virchow at the recent (1888) meeting of German naturalists and physicians, but no conclusion was reached. Among the diseases transmissible from parent to offspring are syphilis, tuberculosis and glanders. Cancer is usually placed in this class, but I believe it is a mistake. Cancer usually develops at a late period of life, and it is more probable that the germs of the disease are engrafted on a body of failing strength than that the germs should have lain dormant from conception to the time of their active development. Besides, as in tuberculosis, in a majority of cases no history of heredity can be obtained, and many persons with a distinct history of heredity pass through life without the development of the disease. Passing to the second division of the subject I state that the severity of the invasion varies, with the condition of the body as regards strength or weakness or idiosyncrasy.

It is a fact long and well known that individuals have a peculiar aptitude or resistance to certain diseases which can not be explained by ordinary rules. In 1883 I estimated approximately the value of vaccination as follows: Take 100 vaccinated persons and probably 90 of them are absolute protected from

small-pox by the vaccination. Five of them have an idiosyncrasy for it by which they will take the disease if exposed, notwithstanding the vaccination, and the remaining five have a resistance to the disease and would not contract it even if not vaccinated. The importance of remembering this division is seen when we consider that unthinking professional men are yet condemning vaccination for small-pox and Pasteur's treatment of hydrophobia simply because all cases are not prevented by these procedures. That the severity of the invasion varies as regards the strength or weakness of the patient is so true as to require no proof, and yet one often sees an important exception to the rule whereby a delicate and apparently weak person resists an invasion of the typhoid fever or other germ with greater success than one in the most robust health. The usual explanation of single attacks of any one disease is that the soil for the growth of its germ has been exhausted. The exhaustion of one soil seems to have a more or less favorable effect on the virulence of the succeeding germs, even if of another disease.

2. The amount of infecting material which gains entrance influences the severity of the disease. The system can dispose of a certain quantity of germs, and Mr. Lister declares the blood to be an excellent disinfectant. It is possible that many slight attacks having an obscure pathology are merely due to the effort of the body to throw off a slight microbial poisoning. But let a certain number of germs gain entrance, and an attack of greater or less violence supervenes, depending on the quantity. I believe that the mild or virulent cases which occur in any given epidemic are largely due to this fact.

3. The character of the infecting material. We can readily imagine that the germs vary in their virulence from one epidemic to another, and that thus one epidemic may be mild and another severe from this cause. What influences the character of the germs and modifies or destroys their virulence is a most important point to determine. Unfortunately it has only been determined as yet in a very limited number of diseases.

4. The tissue which is penetrated and its location often deter-

mines the character of the disease. M. Pasteur has found that the hydrophobia resulting from bites on the face is more virulent than that occurring at points more distant from the nervous centers. On the other hand wounds are often more virulent in the hand than on the arm, and the foot than the leg, probably because the blood current has not the same opportunity for destroying the germs in the more remote portions as in the nearer. Penetration of germs into certain regions as the palm of the hand or in the neighborhood of joints is more likely to result seriously than when into tissue of the same character elsewhere. Tuberculosis is more or less virulent as it invades different tissues, and the same might be said of cancer. In closing this extended and yet incomplete report I wish to confess to a knowledge of its many short comings. This paper will have accomplished its mission if it supplies a foundation upon which work in this direction may be done, and leads to a greater appreciation of its importance.

SENSENEY'S SPECULUM HOLDER.

BY E. M. SENSENEY, M. D., *Asst. in Gynecological Clinic Mullanphy Hospital, Instructor in Physical Diagnosis and Practical Physiology in St. Louis Medical College.*

I WISH to present for the consideration of the medical profession in general, and gynecologists in particular, an original device for holding Sims' speculum with patient in Sims' position.

Every one who has treated the diseases of women knows the superior quality of this form of speculum over that of any other instrument for examining the vagina, or rectum for that matter, yet the fact that it requires an assistant, and that even the assistant must have some practice before he can retain it in the best positions, limits its use to those who can provide themselves with this help. Besides, it is not every woman who feels like exhibiting herself to assistants. The majority of city and

country physicians must make use of the very unsatisfactory bi-valve speculum, which, at best, is but a makeshift, as the greater part of the vaginal mucous membrane is covered up by its two blades. Other self supporting specula are clumsy and inefficient. However, it is unnecessary for me to praise Sims' or to deride other makes, so I will now try to describe my holder and

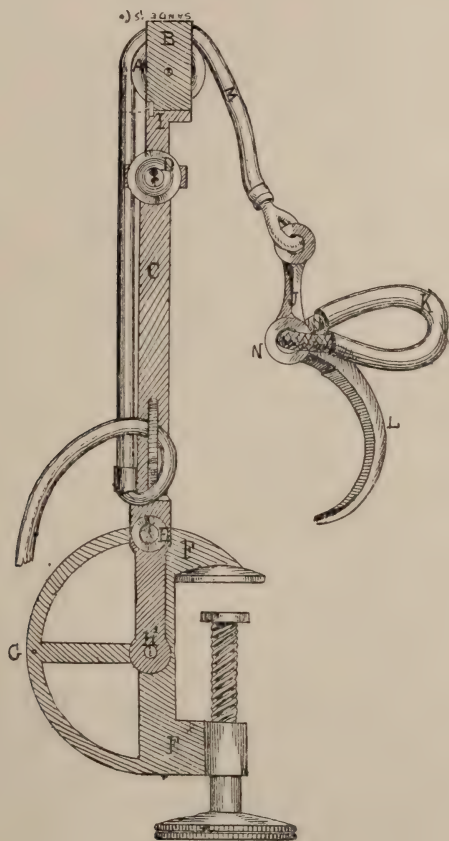


FIG. 1

its clutch which I believe is free from objection.

It consists of a clamp F, an upright part C, which divides at its lower end straddling the clamp F and pivoted at H, while its part above the thumbscrew E is a square tube with a square bar I, sliding up and down in it, and retained at any height by the thumbscrew D. On top of the sliding bar I is fixed a pulley carrier B pivoted eccentrically, enabling the pulley A to turn in the direction of its pull. The whole apparatus rotates around H and can thus be in a moment swung down under the table

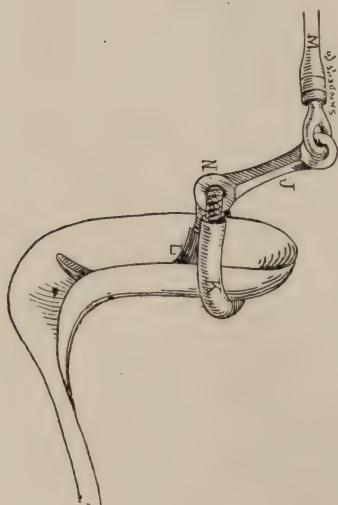


FIG. 2.

when treatment is over with, and the patient can descend without catching her clothing on any projecting point. By swinging the part C around so that the thumbscrew E comes to the point G, the whole appliance can be clamped to sideboard of bed, and operations and applications made there instead of upon an operating table. The part of this holder that I especially claim priority of discovery in, is the clutch J L K and its rubber cord M.

The clutch consists of a sickle-shaped piece J L. The part L is covered with a thick soft piece of rubber tubing and the sur-

face that presses in the blade of the speculum is rounded off somewhat to give a greater bearing surface. The loop of this clutch is made of quarter inch cotton cord and covered with the same kind of rubber tubing as the end L. One end of Sims' speculum is inserted in the vagina or rectum in the usual way, and the opposite end through the loop K, with end L in advance and toward the shank of the speculum as shown in Fig. 2.

The rubber cord M is made as tense as necessary and made secure in the clamping device which explains itself and is quick and easy of application. A glance at the mechanical principle of my clutch shows it to be simply a lever, the fulcrum being where the part L presses in the blade of the speculum: the loop contains the weight and the part J is the lever, consequently the whole speculum rotates around the point N. as a center, and the whole affair drawn by the elasticity of the rubber cord toward the pulley of the support. By moving the clutch toward the shank of the speculum, the end in the vagina naturally moves from the sacrum toward the os uteri; but when placed as shown in Fig. 2, it is pressed firmly against the sacrum, thus dilating the vagina to its utmost. Now a word about the use of the rubber cord. It is a quarter of an inch in diameter and it is easy to see that it is strong enough to stretch thoroughly the soft parts of the pelvis, and do all that the pull of an assistant could do, it has this additional advantage, that the patient can squirm and move around as much as she pleases, but the elastic cord prevents all injury to the parts, and causing no pain such as would inevitably be the result if no such medium was used, and at the same time keeps the speculum in its place in the vagina, and so the operator can go right on with his work. By slackening the cord M the clutch can be instantly removed and the speculum withdrawn. Another advantage of my speculum holder, is that it does not have to be accurately in the plane of the vagina, but three or four inches in or out of this plane makes but little difference. It is, however, somewhat better to have it clamped nearer the operator than the vagina is. By raising and lowering the pulley new vaginal areas are brought to view. When the apparatus is pushed together it is twelve inches in length and can be easily carried in the satchel of the physician

and the country doctor has his assistant with him. This holder is being daily used in the Gynecological Clinic at the Mullanphy Hospital and gives perfect satisfaction. Dr. Frank A. Glasgow, operator, there, says "No assistant's hand can hold a speculum better, and for prolonged operations it is far superior".

HOW A DOCTOR LOST A FAMILY.—Dr.—had been highly recommended to a family who had just come to the city. They attended the same church. He was sent for to vaccinate the children. He was supplied with bovine virus which he obtained from the Health Department, and which was undoubtedly of the best quality. Mrs. F. started to procure a glass of water so that he could moisten the quills and soften the virus, but he said that was quite unnecessary and without delay spit upon the quill. On her exclaiming that she did not like that, he replied, "Oh, a doctor's spit is always healthy." He was never called again to that house and probably wonders why.

DR. D. HAYES AGNEW will probably soon retire from the chair of surgery in the University of Pennsylvania. He withdraws in the prime of life to devote his remaining years to the practice of the profession. No action has yet been taken toward supplying his place. It is uncertain whether the authorities will see fit to promote to the full professorship one of the younger men already identified with its work, or will call some one from the South or West, as Hunter McGuire, or N. Senn, with a view to attracting students from those sections, as well as to securing eminent ability in teaching.

DR. E. WILLIAMS, whose death we noted in our last issue, was the first pure specialist in diseases of the eye and ear in this country, in fact, the first pure specialist of any sort in this country. When the Miami Medical College was revived by Dr. Williams and some of his friends after the close of the war, he took the chair of ophthalmology, the first special professorship ever established in America.

CASES FROM PRACTICE.

CASE OF NECROSIS OF THE LOWER JAW WITH DENTIGEROUS CYST.

BY R. M. FUNKHOUSER, M. D., *Prof. of Beaumont Hospital Medical
College, Consulting Surgeon City and Female Hospitals.*

[*Read before the St. Louis Medico-Chirurgical Society.*]

Of the various causes of necrosis of the jaw that which sometimes occurs after exanthemata is of much interest, especially as authorities are not agreed as to its pathology.

It has been likened to the necrosis produced by the entrance of the poisonous irritation of phosphorus fumes through carious teeth, the most prominent advocate of this theory being Mr. Sattler, while Langenbeck and others believe that it spreads through the system to the jaw. There can be little doubt that the necrosis starts as a periostitis, in time affecting the adjacent structures to a greater or less extent. It is no uncommon thing to see caries or necrosis follow the extraction of a tooth or at the site of a carious tooth, accompanied sometimes by inflammation and abscess of the submaxillary and neighboring glands and even erysipelas. These cases as well as those of the exanthemata are instances of the "*locus minoris resistentiæ*."

I am attending a case now where erysipelas appeared after the periostitis of the jaw had gained head way, the erysipelas not being confined to the face but spreading to the neck, chest, and extremities. I have also treated cases where the erysipelas was first apparent and the localized jaw inflammation with formation of pus followed the constitutional disease. But in these cases did not the poison (micro-organisms) enter the system through the carious tooth or teeth?

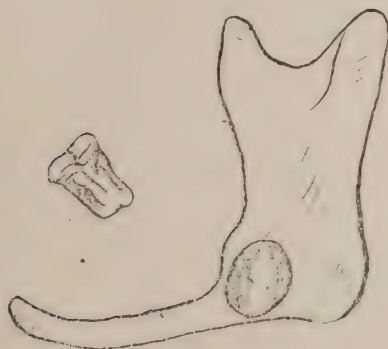
Of course from a surgical standpoint these should be treated the same as any other form of necrosis.

The case that calls forth these remarks is quite interesting in several respects. A gentleman, Mr. K., from Texas, was sent to me by my colleague, Dr. King. Upon inquiry I elicited the following history:

The patient was 41 years old, of medium height, slender build, light complexion, of temperate habits, using neither liquor nor tobacco. For some years he had followed the occupation of teacher, but at present was a merchant. Was of a nervous temperament. In his antecedent history I found nothing of importance. He used artificial teeth above and below. I asked him whether he was sure all his teeth had been extracted, he said he felt sure they had been. My question referred to wisdom teeth. About thirty years ago he had an attack of measles: shortly after his apparent recovery he noticed a swelling of the jaw on the left side near the submaxillary gland which increased. Pus formed and discharged. One tooth after another became loose and dropped out or was extracted. The submaxillary gland and adjacent tissues became implicated, resulting in an external opening communicating with an internal one, from both of which from time to time pieces of dead bone were taken. The disease became chronic, and his wardrobe was not considered complete without bandages and dressings for the running sore. At various times physicians had removed pieces of bone, different methods were indicated for treatment and remedies used notably one, viz., that of burning the bone with acids, which but added to the waste. Several operations were performed for the cure, which, though they may have assisted, failed to bring about the desired result.

Two years ago a surgeon of standing operated and removed a small piece of bone, the patient says from the immediate site where I performed a subsequent operation. For 31 years he has not been free from pain and more or less of a discharge, with occasional splinters of bone. For several weeks at a time the wound would remain closed but would break out again. On account of the unsuccessful attempts at cure, he was rather averse to having any thing further attempted. The appearance of the two sides of his face was asymmetrical, due to changes in the parts brought about by the long continued inflammation and suppuration, the left cheek being more prominent, bulging outward and forward. Slightly

anterior to the angle of the jaw, on a line with the lower border of the body was seen a depression with two small openings in scar tissue four lines apart, admitting a small probe; extending from the angle down the neck, an extensive irregular scar two and a half inches long and one and a half inches wide, the evidence of former severe suppuration, was seen. Through the openings a hard bony substance could be distinguished, supposed to be dead bone, and around it a roughened cavity indicative of caries. The discharge was fetid and scanty. Upon examination of the interior of the mouth, a curious condition was found. There were no teeth: on the left side there was complete absence of the alveolar border, and part of the body was wanting; so frail did it look and



Jaw-bone and tooth, one-half the true size.

feel that the least strain would seem sufficient to fracture it. From the inferior to the superior border of what remained of the jaw bone, was between one-third and one-fourth of an inch, and between the internal and external surface perhaps less. The bone was twisted outward upon its axis, causing the peculiar deformity of the face referred to. There was a minute opening internally, corresponding to a point slightly superior to the mylo-hyoid canal and on a line with the junction of the anterior border of the ramus with the body of the bone, which I subsequently found to correspond to the cavity from which I removed the specimen which I show you.

During the first week in June I operated, assisted by Drs. King and Laidley. After he was anesthetized with ether, an incision

an inch and a half long was made in the line of the two openings already mentioned. In the attempt to remove the bony substance (it proved to be a tooth) the crown was loosened and broken off.

The remainder of the tooth was taken out with a pair of tooth forceps. The direction of the cavity was backward, inward and slightly upward. It was firmly imbedded in the jaw-bone. In all likelihood the position the tooth occupied was due to the long continued inflammation, resulting in the distortion of the bone. It is singular perhaps that the presence of the tooth was not suspected at the operation performed two years before, though it is possible it was enclosed by bony tissues. The edges and sides for a part of the depth were carious: they were scraped, the wound partly sewed up and the cavity dressed antiseptically. Five weeks elapsed before it healed over. At present the wound is closed and the parts apparently perfectly well. The object taken from the jaw-bone with my exhibit is undoubtedly a wisdom tooth.

MARRIAGE IN KENTUCKY.—Not long ago we presented some thoughts regarding limitation of marriage (*Vid. July COURIER*) p. 65. We see that a bill has been introduced into the Legislature of Kentucky prohibiting marriage with an idiot, lunatic, pauper, vagrant, tramp, gambler, felon, or any person rendered physically helpless or unfit for the marriage relation, or any person with a violent temper, or who has within a year been a frequenter of an immoral house. This is more radical in its provisions than had occurred to us as at all probable even in an indefinite future.

BACTERIOLOGICAL LABORATORIES.—These important adjuncts of medical research and instruction are to be found now in connection with the Johns Hopkins University, Baltimore, the University of Pennsylvania, Philadelphia, Howard University, Boston, the Chicago Medical College, Chicago, Ill., St. Louis Medical College and Missouri Medical College, St. Louis; and there are also the Carnegie Laboratory in New York and the Hoagland Laboratory recently opened in Brooklyn. It is no longer necessary for students to go to Germany in order to secure proper instruction and opportunities for work in this department.

EDITORIAL.

SUICIDE AND LEGISLATION.

Statisticians and especially those who are concerned with the records of various life insurance companies have paid considerable attention to the matter of suicide in its various relations.

A valuable paper on the relation of suicide to legislation or *vice versa*, was read before the Medico-Legal Society of New York some time ago by its president, Clark Bell, Esq., and was published in the June issue of the *Medico-Legal Journal*.

He quotes statistics from French and English sources, showing that, in these countries at least, suicide is upon the increase.

Among the most interesting data cited are some compiled by Dr. O'Dea, from which it appears that:

1. "Suicides increase in number until extreme old age (limited in England after seventy-five years).
2. The increase is in direct ratio to population until the age of thirty, after which it continues in inverse ratio to population until the allotted time of life.
3. The number of suicides is very small, both absolutely and relatively to population previous to the age of fifteen."

The ratio of the sexes is generally three men to one woman; but in England and Wales the ratio is two to one, and in Denmark four to one. In large cities the ratio is nearer equal.

Mr. Bell notes a remarkable difference in different countries as to the rate of mortality from suicide, and thinks there is no satisfactory explanation for this fact. Another curious fact is the difference in this respect between cities in the same country. In

our own country he finds the proportion of suicides in San Francisco and the cities of Nevada largely to exceed that in New York, Brooklyn or Philadelphia.

The aim of Mr. Clark's paper is to discuss what can best be done by society to diminish the number of suicides by legislation or otherwise.

He thinks there can be little doubt that the extreme laws of the Romans and Greeks, and those which were in force early in France and Great Britain, had a powerful influence to deter from the commission of this crime. It is apparent also that the form of suicide known in India under the name of suttee has been completely suppressed by the laws and regulations enforced by the British government.

He mentions a proposition submitted to the International Medico-Legal Congress at Paris ten years ago, providing that the corpses of all suicides be furnished to the medical schools for dissection, except in cases where the individuals were insane or irresponsible.

He says of this that "the consequence upon the family is one of the real arguments for the passage of such a law, because the suicide, if sane, must consider all the consequences of his act, and this must operate in many cases as an enormously powerful restraint against the commission of the crime.

"No valid objection could be raised by the family in the case of a suicide that could not be raised if a member convicted or accused of any other crime should die pending trial or after conviction while in prison."

But he well says: "What is needed is additional force upon the moral sense of the community, to render the crime of suicide more generally odious and detestable. There is at present practically no legal restraint against suicide. The suicide has nothing to fear for his crime, even if unsuccessful. Our laws are not enforced."

We can but express our concurrence in the opinion of Mr. Bell

that society is not doing its whole duty in this matter. By suitable legislation, and by proper moral and religious training much might be done to arrest the hand of weak persons who are tempted to commit suicide, and who now find no effective restraint in legislation or public sentiment.

REPRESSION OF MENSTRUATION AS A CURATIVE AGENT.

Dr. E. C. Gehrung contributed to the November number of the *American Journal of Obstetrics* an article on this subject which seems to us one of special importance.

He believes that an entirely unnecessary and often injurious amount of blood is lost at the menstrual periods even by those who are strong and robust, and that this is still more markedly the case with the weak and anemic.

Among the evils resulting from this undue waste he enumerates neuralgia, neurasthenia, melancholia, anemia with all its neuroses and circulatory disturbances, chlorosis (?), uterine diseases, such as flexions and versions, vegetations and even inflammations, diseases of the uterine appendages, etc.

As Dr. Gehrung remarks, we have all seen such cases, in which all that seems to be accomplished during the interval between the menstrual periods is to make a supply of blood to be wasted at the succeeding monthly flow.

Dr. Gehrung takes the position that by the proper application of the tampon it is entirely possible to limit or arrest this unnecessary and debilitating waste and save to the support and strengthening of the patient that vital fluid which otherwise would be wholly wasted.

For two years he has carried into practice this opinion to which he had gradually come.

He finds that not only is the anemia diminished by the amount

of blood actually retained in the circulation, but the tendency to waste is diminished on account of the improvement in the quality of the blood and the improved tonicity of the uterus.

He prefers absorbent cotton either formed in little balls or torn in narrow strips of twelve to twenty-four inches in length. These are squeezed dry from a one to two per cent solution of alum in water and are then packed around and upon the cervix uteri until the vagina is filled. He uses either a Sims' speculum or a bi- or tri-valve speculum. To make the tampon solid he uses two pairs of dressing forceps, the one to press the tampon in the opposite direction from where he intends to make the next application by the other. He leaves the tampon untouched for forty-eight hours, "unless the bleeding should recur sooner when it should immediately be applied fresh." He has found this not only to lessen or stop the bleeding but also the duration of menstruation, so that a woman habitually bleeding eight or ten days may be entirely through in two or three days. Rest is desirable though not necessary during this treatment.

He directs his patient to call at his office or send for him on the first sign of the coming menstruation, and finds that even so as much or more blood is usually lost before the tampon is applied than is necessary or desirable.

He has met no unpleasant or detrimental effects from this treatment.

He considers this treatment applicable to all cases in which the patient is losing at her menstrual periods more than she can afford to spare. He is convinced that a loss of two to four ounces will satisfy the demands in any case and that in anemic patients all that can be saved should be saved.

We see no flaw in Dr. Gehrung's argument. On the contrary we are most fully in accord with his view, and his well-known care in observation and skill in practice warrant the assurance that he has given the profession a most valuable principle of treatment in these extremely trying and annoying cases.

BOOK REVIEWS AND NOTICES.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By JOHN V. SHOEMAKER, A. M., M. D., Professor of Skin and Venereal Diseases in the Medico-Chirurgical College of Philadelphia, etc., with colored plates and other illustrations. New York, D. Appleton & Co., 1888.

In his preface to this large and handsome volume on diseases of the skin, the author states that his main object in preparing it was to present in a concise form, and as free from cumbersome technicalities as possible, a treatise that would be useful to the general practitioner. The only claim that he makes for originality in its composition is a statement of the relative effects and values of numerous medical agents that he has tested in his clinical experience. The descriptions of the various cutaneous diseases are well written, but do not differ, so far as we can see, either in language or method, from similar descriptions in other works on dermatology. Our main criticism of the book as a whole is in reference to the very points upon which the author claims originality, viz., the therapeutics of skin diseases. We do not at all doubt the writer's good faith and sincerity as regards his recommendations for treatment, but even granting the value of the vast array of drugs that he places before the reader, we cannot but believe that he has rendered the subject more confusing and difficult of apprehension to the general practitioner than it was before. However, this is a matter that each one can test for himself. The pictures scattered through the text could have been safely omitted.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By JAS. NEVINS HYDE, A. M., M. D., Professor of Skin and Venereal Diseases in the Rush Medical College, Phila., Lea Bros. & Co., 1888. Second edition, revised and enlarged. 8vo.; pp. 676; sheep or cloth.

The first edition of this well-known text-book was fully noticed in the *COURIER* at the time of its first appearance. The work of revision has been thoroughly and conscientiously performed, and

nearly one hundred pages have been added, together with a number of new wood cuts and two colored plates. The classification and nomenclature of the American Dermatological Association has been adhered to throughout the work, and we believe with the author that in this way the practical value of the treatise has been much enhanced.

W. A. H.

A CLINICAL ATLAS OF VENEREAL AND SKIN DISEASES, Including Diagnosis, Prognosis and Treatment. Illustrated with one hundred and ninety-two figures, etc. By ROBT W. TAYLOR, A.M., M. D., Surgeon to Charity Hospital, N. Y., late President of the Am. Dermatological Association, etc. Parts I and II. Philadelphia, Lea Bros. & Co., 1888.

We owe an apology to our readers for failing to notice this *opus magnum* of Dr. Taylor's some months back.

It is impossible to notice the various excellent features of this superb atlas in detail, and, indeed, when we say that the text has been prepared by one of the foremost dermatologists and syphilographers of our day, and that the illustrations have been produced by the Messrs. Lea, there is very little to add beyond the recommendation to physicians to subscribe for it without delay. When the work shall have been completed—it is now being issued in parts—we shall endeavor to give a comprehensive review of its contents.

W. A. H.

THE PHONOGRAPH IN MEDICINE.—Dr. J. M. Bleyer, (*Med. Rec.*, Nov. 17,) who has been experimenting with the phonograph ever since it was first introduced, regards it as a valuable assistant to the physician, making it practicable thereby to preserve and reproduce the sounds heard on physical examination, instead of simply describing them by words in giving case histories. Dr. Wm. Porter also speaks highly of its value in the *Weekly Med. Review*.

COLD FOOD is more readily retained than hot, says *Jour. of Health*, and the *Sanitary Era* remarks that it is often the case that ice-cream suits admirably some conditions where hardly any other food is acceptable. We have frequently ordered ice cream for patients with irritable stomachs in febrile conditions with decided advantage.

DOMESTIC CORRESPONDENCE.

NEW YORK LETTER.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.—LICHEN
PLANUS AND RUBER.—URETHRITIS.—RETROJECTIONS.—
NEW ENDOSCOPES.—TREATMENT OF STRICTURE.—AN-
THRACOBIN.—WAX MODELS OF SKIN DISEASE.—
INTUBATION.—COMPULSORY CLINICAL IN-
STRUCTION.—CHARITY WORK.—DRUG-
GIST FINED.

NEW YORK, Nov. 11, 1888.

EDITOR COURIER.—Since my last letter I attended the Congress of American Physicians and Surgeons in Washington, and as New York was well represented in the work done I may be excused for briefly referring to it. The congress impressed me as being an eminently successful one, as such meetings go. There was surely lots of good work done in the various sections. Too much I should say if a fair judgment may be formed from the number and length of the papers in the genito-urinary and dermatological departments. When, however we consider just how much that is new in medicine was developed, and how many facts were settled and how many truths were nailed and clinched, we must acknowledge that little was accomplished. One subject which received considerable attention may be said to have practically settled the question for this country. I refer to the non-identity of

LICHEN PLANUS AND LICHEN RUBER.

Three papers were read upon the subject; one by Fox, one by Robinson and one by Taylor, all of New York. With the exception of two gentlemen of the New York Dermatological Society, all the members have recently stated their belief that lichen ruber and lichen planus are distinct forms of disease.

Dr. Elliot, on the other hand, has stated his unqualified belief that the two forms of eruption, lichen planus and lichen acuminatus belong to the same disease—lichen ruber: this view is generally had in Europe. In this country lichen planus is much more frequent than lichen ruber, and all three papers contained strong arguments to prove that they are not one and the same disease. In the discussion the opinion of the non-identity was unanimous.

Dr. Robinson said that too much weight must not be given to the appearance of the primary lesions, (and that their anatomical seat will not account for the differences in the two forms of eruption. The whole course of the disease and all the symptoms must enter into the diagnosis. The symptoms, course, prognosis, histology and the effect of drugs are different in the two forms, and there is no proof that they occur in combination or are transformed the one into the other.

Dr. Fox reported five cases of lichen ruber which he had treated. Two bore a resemblance to lichen psoriasis of Hutchinson, and two had developed acute exfoliative dermatitis lasting for a few weeks. Two had resulted fatally, and in two now under observation the prognosis is grave.

Dr. Taylor said that only in the second stage of lichen ruber, when the papules are fully developed, numerous, and distinctly clustered in groups, should the one disease be mistaken for the other. In the third stage as a result of the coalescence of the papules, there occurred chronic infiltrated, pigmented and scaly patches. Particular attention was directed to the nails, which became rough, serrated, much thickened and dull or dirty yellow in lichen planus, while in lichen ruber there are no changes in the nail.

URETHRITIS

furnishes an ever constant theme for discussion and at the congress it was considered from various points of view. Two gentlemen from your own city, Dr. Bryson and Dr. Burnett, treated the subject from the standpoint of no less than a thousand three hundred and ninety-four cases observed.

I am pleased to note that they recognize the gonococcus as an essential etiological factor, for strange to say some most able men here refuse to acknowledge it. Dr. Sturgis says in the *Archives of Pediatrics* of July last, "I regard this point as by no means defi-

nitely settled as yet, certainly not sufficiently so for us to be able to state positively that the gonococcus may not be found in other discharges besides that of gonorrhea, and under the circumstances I should certainly advise very strongly against considering their presence or absence as confirming or negating a diagnosis of gonorrhea." Dr. Taylor, as well as Dr. Sturgis expressed his disbelief in the gonococcus as a cause of the disease. Granting that it has no causative effect, I think the question may be considered as settled that the gonococcus has a most decided diagnostic significance, and I have as yet found no reason to change the opinion expressed in my article on the subject in the *Journal of Cutaneous and Genito-Urinary Diseases*, of March, 1887, that the gonococcus is in all probability the specific microbe of gonorrhea.

RETROJECTIONS.

Dr. Brewer tells me that he continues to obtain better results from his hot 1 to 40,000 or stronger bichloride retrojections than by other means of treating gonorrhea.

Dr. Palmer, of Louisville, in his paper at the congress said that the value of the method is not so great as its advocates have claimed. Most of those who spoke preferred irrigation, carried out three times daily with the aid of a Keifer nozzle. Dr. Keyes prefers his "universal injector."

Dr. Sturgis makes local applications to the diseased portion of the canal in chronic urethritis, applying nitrate of silver solutions as strong as sixty grains to the ounce though a short endoscope.

NEW ENDOSCOPES

will be shown at the academy meeting to-morrow night by their inventor Dr. Wm. K. Otis. One has a fenestrum extending along one side with a dilating apparatus by means of which the mucous membrane can be pushed aside and prevented from falling into the slit. This dilatation it seems to me may be found very valuable in treating chronic urethritis, as there are usually diseased areas which can not be reached until the canal is dilated. This like the other endoscope, is provided with a movable reflector. Another instrument for securing an image of the deep urethra has a short break at the distal end into which the reflector passes. A third device is arranged for flushing any portion of the canal, washing

off any secretions from the field of vision or for making applications to a limited area of the canal. A small tube is soldered fast to the inside of the endoscope. It opens just inside of the distal end of the instrument. At the proximal end the tube dilates to receive the nozzle of a small bulb syringe used for throwing in a stream and again sucking it out. If a circumscribed area is to be treated, a few drops of a medicated solution are thrown down the same small tube by means of a hypodermic or similar small syringe.

TREATMENT OF STRICTURE.

Electrolysis did not receive much support at the congress, in fact what it did receive was more like a black eye. Dr. Rohé, of Baltimore, rather favored it incidentally in a paper on Electrolysis read in the dermatological section. Dr. Keyes believes after using electrolysis to a limited extent in treating urethral stricture, that mild currents do no good, and that strong ones are full of danger. He says "My study of the subject and the experience it has brought me, digested with all the impartiality I possess, lead me to state that the allegation that electricity, however employed, is able to remove organic urethral stricture radically, lacks the requirements of demonstration."

I understood that the apostle of electrolysis in stricture, Dr. Newman, intends to answer Dr. Keyes' paper as soon as it is published. Dr. Otis after an experience of seventeen years in which he has practiced dilating urethrotomy as a radical cure for stricture still regards it as the best operation, and believes the failures by others to secure good results are due to a failure in properly carrying out the requirements. The strictures must be cut upon the roof, strictly in the median line, and up to the normal calibre of the canal.

I was present at an operation the other day in which a patient with extravasation due to a tight stricture had perineal section done by Dr. Otis. The urethra was first washed out and injected with a penis-syringeful of sweet oil. A small guide was then passed after patient trial, and on this was threaded a small Maissonneuve urethrotome and the strictures divided so as to enable a grooved staff to be passed into the bladder. This was held firmly in the median line while the operator with a finger in the rectum cut

down upon it and passed into the bladder. The strictures of the anterior urether were then dilated up to No. 34, (the normal according to the circumference of the penis) and divided with the operator's own instrument. The bladder was washed out with an antiseptic solution and a drainage tube inserted. The patient has since done extremely well.

ANTHRAROBIN

is a new drug which I am now using at the Charity Hospital. Liebermann discovered it, and its chemical composition was so similar to that of chrysarobin and pyrogallol it was supposed that its therapeutic action would be equally marked, and investigation has shown this to be the case. Dr. Bronson read a paper at the congress giving his experience with it. He had employed usually a ten per cent ointment made with vaseline, and found it of value in psoriasis and herpes tonsurans. I find that the advantages which the new drug possesses over chrysarobin are that it is cheaper, does not produce so much irritation of the healthy skin that it can be applied to the scalp without the danger of exciting a dermatitis, and even to the neighborhood of the eyes, and it removes the lesions of psoriasis about as well and as speedily as chrysarobin will. It can be made into a paint with flexile collodion or traumaticine, but for a penetrating effect, as in treating trichophytosis, it is better to rub up a dram of the powder with two or three drams of olive oil and add to an ounce of lanoline or axunge.

WAX MODELS OF SKIN DISEASES.

The profession is being well supplied with new atlases of skin diseases. The photographic illustrations put out by Fox last year was a beautiful collection. Morrow is now editing a set of plates which have so far received much favorable, and I believe well merited criticism, and Dr. Taylor is at work on still a third atlas which I have not yet had the pleasure of seeing.

Beautiful and accurate as colored plates and colored photographs can be, they do not compare with wax models when these reach the perfection found in the Baretta Museum in Paris. Not only is the form and color perfectly reproduced, but the lesions at times have the feel of reality. It is not generally known that we have in New York a physician who makes excellent wax casts. Dr. Levisend

has made for me, as well as for a number of others, very faithful and beautiful reproductions of skin cases in wax. He describes his process in the *Medical Record* of October 27.

INTUBATION.

In the pediatric section of the academy on October 24, Dr. Dillon Brown read a paper which gives the fullest and most valuable data yet collected. He has tabulated 2200 cases from all sources but chiefly from work done in this country, showing 28% of recoveries. This number includes 204 of the reader's own cases, the largest number, if I mistake not, reported by any operator. Out of this number 58 made good recoveries or nearly 29%. I think the paper will be published in the *Archives of Pediatrics*.

According to a new rule at the College of Physicians and Surgeons, third year students will have

COMPULSORY CLINICAL INSTRUCTION

of a practical kind at the new Vanderbilt clinic as a prerequisite to graduation. At the other schools I believe what is called section teaching is optional.

I see in the October number of the *COURIER* that you deem the fact worthy of note that the Eastern Dispensary pays its physicians. The fact is every dispensary should be forced to do the same. There is a possibility that the Vanderbilt clinic will soon do so.

Physicians, by giving to the public valuable services which should be paid for, simply lower themselves in the estimation of the public. One reason why the profession is not more respected in this country is simply because we make ourselves too cheap. I found this summer in Holland that no physician thinks of doing free dispensary work. After a man has spent years in preparation at an outlay of much money he feels entitled to compensation even for charity work.

And there, as in Germany, where all positions have a salary attached to them (though possibly small), the physician is respected as he never has been here and never will be until he respects himself enough to refuse to label his stock in trade "for sale cheap."

Adopting, as the Eastern Dispensary has, the feature of competitive examination, all have an equal chance of obtaining the posi-

tions, and the patients to be treated have a much better chance of receiving careful and competent attention.

A DRUGGIST FINED.

I have in a previous letter spoken of the dangers of counter prescribing. One danger has just been realized by a dispenser who was not satisfied to confine his efforts to dispensing.

Through the instrumentality of the County Medical Society a fine of \$50 has been imposed upon him.

The American Academy of Medicine will meet in this city at the New York Hospital on Nov. 13 and 14. A number of excellent papers are promised.

At the last examination of the Army Medical Board only two men were passed out of about twenty applicants. This must make others feel like Dr. Casey who writes to the *World* in answer to "What would you do if you were a millionaire?"

"I would become a philanthropist of the highest order. I would hunt up every young fellow I could find who intended to become a doctor and set him up in another business he could make his bread and butter at."

Perhaps Dr. C. was one who did not pass.

CHAS. W. ALLEN, M. D.

NATIONAL PATHO-BIOLOGICAL LABORATORY.—A bill is to be presented to Congress providing for the establishment of a National Patho-biological Laboratory for the purpose of investigating disease. The bill places the direction of this Laboratory in the hands of the Surgeon General of the Marine Hospital Service. In our opinion it would be a wise arrangement to place this under the care of the National Board of Health as well as the quarantine service of the country.

DYSLALIA FROM CIGARETTE SMOKING.—Excessive smoking of cigarettes is reported to have been the cause of a remarkable difficulty of speech and stammering in a young Californian. By abstinence from tobacco and the exhibition of bromides, valerian, etc., he was relieved in ten days.—*Med. Age*, Nov. 10, 1888.

REPORTS ON PROGRESS.

MEDICINE.

BY L. T. STEVENS, M. D.

Physical Examination of the Stomach.—DR. P. C. KNAPP, of Boston, points out that until recently the diseases of the alimentary canal had proved the most obscure chapter in medicine, that less was actually known of them than was known of the diseases of the lungs before the days of Laennec. Treatment was like “striking out blindly in a dark room with a club;” but now with the increased and more definite knowledge which has come through the recently discovered methods of physical examination of the stomach, we are able to prescribe more accurately and definitely. From the physical examination of the stomach information is obtained as to the following points:

1. The time of digestion, which is not accurately known, varying with the individual and with the character of the food. Leube has, however, found that normally, after a definite meal, all food has disappeared from the stomach at the end of seven hours. In a certain proportion of cases it may disappear before that time, but if after seven hours food is found in the stomach it shows that the process of digestion is delayed. To test this, Leube order a test breakfast—soup, a piece of beefsteak, and a slice of white bread, with water. At the end of seven hours the stomach is washed out, using about three funnels full of water, and the wash water is examined for undigested fragments of food.

2. The absorbent power of the stomach, the test of which is simple. Penzoldt has found that by giving a small amount of iodide of potassium (3 grains) in a gelatin capsule with a wine glassful of water at least three hours after a meal, or preferably on an empty stomach, the salt is absorbed and can be detected in the saliva. The patient is directed to spit once a minute on a bit of

starch paper, which is then touched with a drop of fuming nitric acid. In health in from 7 to 15 minutes there is found first a red-denning and then a bluing of the paper.

3. The motor activity of the stomach, the test of which is equally simple, and for this purpose salol is used, which becomes changed into salicylic acid in an alkaline medium. The patient is given 3 to 5 grains of salol, and specimens of the urine obtained every 15 to 30 minutes. The addition of a drop of tinct. ferri chloridi to the urine will, when it contains salicylic acid, give a deep bromine-red color. This color is said to be found in from half an hour to an hour after taking salol, but later observers make the time rather longer.

4. The chemical composition of the gastric juice. The method of obtaining the gastric juice and testing its chemical composition, have been the subject of much controversy, and the question is by no means settled yet. Knapp prefers to get the gastric juice undiluted by passing the stomach-tube 3 hours after a hearty meal, and expressing a part of the contents of the stomach through it. The juice after filtering is tested for hydrochloric acid and lactic acid. Various methods have been devised, but perhaps the best test for hydrochloric acid is that of Gunzburg, in which a few drops of a solution of phloroglucin (2 parts) vanillin (1 part) in 30 parts of absolute alcohol, are added to an equal amount of gastric juice and gently warmed on a porcelain plate; if hydrochloric acid be present, deep red crystals are formed. This solution reacts to very small amounts of hydrochloric acid, and does not react even to concentrated organic acids. The test for the acids found where there is fermentation is that of Uffelmann for lactic acid. He takes one or two cc. of the following solution:

4 per cent sol. acid carbolie,	-	-	-	10.0
Aquæ destill.,	-	-	-	20.0
Liq. ferri sesquichloridi,	-	-	-	gtt. i.

This forms a steel blue solution, which is decolorized by hydrochloric acid, and turned yellow by lactic acid. After the presence or absence of the acids has been determined, a quantitative estimation of hydrochloric acid should be made by the ordinary method with phenol-phthelein. The average normal amount of acid is about .2 per cent.

5. The digestive powers of the gastric juice. A bit of egg albumen is put into a test-tube containing 10 to 20 cc. of the juice,

and kept at the body temperature. It is always well to take a piece of the same size. A bit measuring 8x4x1 mm. should be digested in from 2 to three hours.

6. The size and position of the stomach. Other methods besides palpation and percussion are, as a rule, necessary for this purpose. Kussmaul inflates the stomach by generating gas within, for this purpose giving 2 grm. of sod. bicarb., and $1\frac{1}{2}$ grms. of tartaric acid; the size of the stomach can thus readily be determined by palpation and percussion. Such an examination as indicated above seems elaborate, but is really comparatively simpler—less difficult, except as far as obtaining the juice, than a thorough examination of the urine; and by it our knowledge of diseases of the stomach has been put on a firm foundation. A man who tries to treat a serious and obscure case of gastric disturbance without resorting to them, is as guilty of negligence as a man who tries to treat an obscure case of thoracic disease without using the stethoscope.

These new methods teach us, in regard to treatment, enough to better our present plans. In the majority of cases there is a normal or excessive amount of hydrochloric acid, hence the common exhibition of it is needless, and often injurious. Where the acid is in excess, we should not depend on alkalies. The stomach should be washed out at night, Carlsbad water given in the morning, and the stomach given increased work by giving the patient an albuminous diet, avoiding carbohydrates. When acid is absent, or much diminished, the ordinary dose of m. v-x is much too small; 30 to 45 minims should be given after each meal, in three doses, 15 minutes apart, beginning about an hour after meals. When acidity is due to lactic acid from fermentation, this should not be combatted solely by alkalies; the stomach should be washed out, and hydrochloric acid be given, for when hydrochloric acid is present during digestion it checks the formation of lactic acid. In catarrh and dilatation washing out the stomach is a remedy to be first employed. In muscular insufficiency strychnine and very mild faradic currents may prove serviceable. In "nervous dyspepsia" special treatment is uncalled for. Nothing has been said about pepsin; in the majority of cases there is plenty of pepsin in the gastric juice, and the addition of any more is needless, and, therefore, wrong. In a few instances when partially digested food is to be given, pepsin becomes necessary in its preparation, otherwise the use of

pepsin is thoroughly unscientific.—*Bost. Med. and Surg. Jour.*, June 7, 1888.

Ascites from a Varicose Condition of the Peritoneal Veins.—

PROF. DE RENZI, of Naples, exhibited at this clinic a male patient, æt. 45, suffering from the above condition. The patient's father suffered much from varicose veins, leading eventually to edema of both legs. The patient himself had been subject to dyspeptic symptoms from boyhood, and 12 years ago the veins of the left leg became varicose. Later the veins of the other extremity and of the abdominal walls also became affected, and varicose ulcers appeared on both legs. The abdomen began to swell shortly before his admission into the hospital, when he was found to have a considerable amount of ascites. The superficial veins of the lower extremities and of the whole abdominal wall were extremely dilated and tortuous, and in places found cirroid growths. The skin and subcutaneous tissues were edematous, and also much thickened and indurated. The liver was of the normal size, and there were no symptoms pointing specially to hepatic disease. The case, however, bore a strong general resemblance to ascites from hepatic cirrhosis, where more or less of compensation had been effected through the establishment of a collateral circulation through the abdominal parietes. But in such cases, when the direction of the flow of blood through the dilated abdominal veins is ascertained by pressure on one of them with the finger, it is found to be from above downwards, that is, from the hypochondrium and umbilical veins through the epigastric veins to the iliacs. In this case, however, and in all those where the obstruction is in the systemic veins, instead of the portal, the flow was from below upward, that is, toward the internal mammary, thoracic and diaphragmatic veins. There was no cardiac affection, and since, after ample examination, no other adequate cause could be discovered, Renzi suggested that in all probability the ascites was due to a varicose condition of the veins of the peritoneum. The hereditary nature of the malady and its very extensive distribution superficially in this case rendered the affection of the deeper veins extremely probable. To this cause also he attributed the persistent digestive derangement. The patient's occupation involving long standing, favored venous dilatation and stagnation, but the author considered the most important influence to be atavism. As regards progno-

sis, he considered that the man, whose ascites had already greatly diminished, would continue to improve up to a certain point, but that complete restoration was, of course, impossible. He was treated by rest, diet and aperients; and medicinally, by the subcutaneous injection of ergotine. Under this treatment he rapidly improved, the urine increasing in a few days from $14\frac{1}{2}$ to 133 ounces. It was considered that the beneficial influence of the ergotine was very definite.—*London Med. Recorder*, Oct., 1888.

Injurious Effects of Tight-Lacing.—DR. KIANOVSKY publishes the results of his experimental researches on 30 women, with the object of determining the influence of stays on the vital capacity of the lungs, expiratory excursions of the chest, strength of inspiration and respiration, blood-pressure, pulse, and breathing. Of the 30 subjects for experiment, 14 were married women and 16 girls, the age varying from 18 to 44 years; all but 2 were habitual tight-lacers of from 5 to 27 years' standing. Of the 28, movable kidney was present in 8, pulmonary apical processes in 6, anemia or chlorosis in 5, habitual constipation or intestinal catarrh in 14, hysteria in 5.

The experiments show that stays most decidedly diminish the pulmonary vital capacity; energy of inspiration and expiration, especially that of the former; and the respiratory excursion of the chest. The corset, therefore, dooms the tight lacer to oxygen-starvation, her chest being constricted, and the amount of oxygen inspired necessarily diminished. This oxygen-starvation explains sufficiently the well-known fact that habitual tight-lacers habitually suffer from dyspnea and cardiac palpitation on any somewhat brisk locomotion, are easily fatigued from any muscular or mental exercise, have but a poor appetite, easily faint on any strenuous efforts etc. The pulse was found to be accelerated by a brisk run 8 to 20 beats per minute more under stays than without; and similarly the frequency of respiration rose 8 to 16 points per minute beyond the point reached with the stays off. Blood-pressure experiments by means of Basch's sphygmomanometer, observations being made first without stays, and then $\frac{1}{4}$ or $\frac{1}{2}$ hour, 3 and 5 hours after the corset had been put on, showed that, as a rule, after a fleeting rise depending upon the lacing procedure itself, the blood-pressure slowly falls; a fact which is explained by arterial anemia induced by tight-lacing. Kianovsky is as far as possible from ever expecting

that any tight-lacer will be deterred from her suicidal practice either by his work, or by that of his predecessors. Undoubtedly, the woman—or rather the lady, the “civilized” lady—will remain as ever an inert slave of fashion, until some great social changes involving the educational system take place. Up to that time, all scientific researches, however able and rich in convincing results; all medical sermons, however well-meaning, ardent and talented, will have no practical consequences whatever. So that, for a time to come, every new worker or writer on the subject will invariably find himself enabled by the state of the matter to commence or conclude his paper with Professor Tueber’s words, and to feel most positively sure that they will find no echo in the barren chests and empty heads of tight-lacers. “In admiring such distorted forms as the constricted waist, we are neglecting the criterion afforded by nature; we are departing from the highest standard of classical antiquity; we are simply putting ourselves on a level in point of taste with Australians, and Negroes; we are taking fashion, and nothing better, higher, or truer for our guide.—*London Med. Rec.*, Oct. 1888.

Gelsemium Sempervirens.—DR. G. M. GARLAND, of Boston, after referring to the well known physiological properties of this drug, specifies some conditions in which he has found it useful for mitigating suffering and correcting perverted nervous functions. Foremost among these conditions comes hysteria, to combat which there is no drug which can excel gelsemium, inasmuch as it affects the motor regions of the nervous system before the sensory. It is usually necessary to push its administration until diplopia and heaviness of the lids appear in order to reach satisfactory results. As a remedy for certain kinds of headache, it has no rival. Catarrhal headache, and those which accompany dysmenorrhea and nervous debility from overwork, are amenable to gelsemium. It will also conquer neuralgias of the superior branch of the fifth pair when they are not referred from neighboring inflammatory or irritated conditions. The headaches of Bright’s disease may be mitigated by it, but its use in ordinary bilious or sick headache is not attended with any success. In the early stage of acute bronchitis, when the cough is disturbing, tubes are dry, and there is pain across the chest, gelsemium will relieve this distress, start up the bronchial secretions, thereby furnishing material for expectoration

and diminution of the inflammatory tension. The bronchial glands are not the only ones influenced by the drug. The sweat glands are also subject to its action, and, given under proper conditions, this drug is an unfailing diaphoretic. Follicular tonsillitis is usually accompanied by soreness of the throat, high fever, neuralgic pains in the head, back and legs, all of which discomforts abate rapidly with the diaphoresis induced by gelsemium. The patient is put under blankets and is given 3 to 5 drops every hour until he sweats or has taken 15 to 20 drops. Acute muscular rheumatism is also amenable to this treatment. Gelsemium will allay excitable reflexes and diminish the nervousness of passive cerebral congestion, and hence writers claim good results from its use in acute meningitis. It has been recommended for malarial chills in place of quinine. It is said to soften a rigid, unyielding os, and in fractional drop doses at frequent intervals will diminish after-pains. Combined with quinine it is said to correct the ringing in the ears and headache often produced by the quinine, so that the latter drug could be given to sensitive patients who were otherwise unable to take it. For the relief of neuralgias one should give 3 to 5 drops every half hour or every hour, according to the intensity of the pain. To produce sweating, one drop every half hour is sufficient, the patient being well covered up in bed. One drop every hour of the fluid extract will relieve the cough or discomfort of acute bronchitis.—*Boston Med. and Surg. Jour.*, Sept. 13, 1888.

Sulphuric Acid in Medicine.—DR. C. P. BECKER, of Brooklyn, brings together in this article the various morbid conditions in which this remedy has been found of benefit. For internal use we have two principal forms, the official dilute acid and the aromatic. In administering it, it is important to remember that it is capable of replacing all other acids, organic and mineral, and it is, therefore, incompatible in prescriptions with nearly all salts except the soluble sulphates. Its most common use is, perhaps, as a solvent for quinine, and it is well to know that the official acid must be poured on the quinine before mixing it with water, otherwise it will take a much larger amount of the acid to form a solution, which will then be too sour. As a tonic it is very serviceable, especially during convalescence from pneumonia, pleuritis and erysipelas, and after all exanthematous fevers. It frequently acts like

a charm in night sweats, often effecting a permanent cure in the course of two or three days. Even during phthisis pulmonalis its beneficial results are noticeable, stopping the sweats and enabling the patient to obtain a refreshing sleep, and giving a better opportunity for iron, cod-liver oil, or hypophosphites to exert their favorable effects. It seems sometimes to interfere slightly with digestion, in which event its use should be intermittent or the dose reduced. No routine dosage should be relied upon, but its action should be carefully watched, and the smallest amount be given that will produce a favorable result. In the hands of the author it has acted as a specific in the treatment of furuncles, invariably cutting short a course of boils, and often aborting a threatened carbuncle: In boils and carbuncles a very weak solution applied externally appears to increase the rapidity of their healing. In his opinion it is very serviceable in the treatment of all suppurative diseases, as a preventive against blood-poisoning, and after it has already manifested itself. In the treatment of typhus and typhoid and of all fevers with gastric or abdominal complications, it should be administered, especially on account of its powerful germicidal properties. The undiluted acid has been used for its caustic and escharotic effects; but the solid caustics are more manageable for ordinary purposes. Finally, attention is called to the possible usefulness of the acid in aseptic and antiseptic surgery. It is much cheaper than phenol or corrosive sublimate; it has not the vile odor of the former, nor the poisonous properties of either of them; it can never do harm except when of corrosive strength; and if it were absorbed it would act as a tonic instead of a poison. It is, of course, not applicable for the submersion of surgical instruments, but for direct application to wounded surfaces, or as a dressing, it would probably be found to possess definite advantages.—*N. Y. Med. Jour.*, Sept. 15, 1888.

A Case of Remittent Fever With an Idiosyncrasy toward Quinine.—DR. GIBBS, of Zanzibar, reports this case in a child aged 2 years, 9 months, in which there was repeatedly observed after the administration of 5 grains of quinine, hyperpyrexia attended with a rapid feeble pulse and once with convulsions. In addition, he brings out another point observed in 20 cases of remittent fever, namely, the superior antipyretic influence of salicylate of sodium over that of quinine. No good results have been obtained by him from antipyrine in this disease.—*Glasgow Med. Jour.*, Sept., '88.

Hydriodic Acid.—Its Uses in General Practice.—DR. W. C. WILE, of Connecticut, believes that the advantages which this remedy possesses over other forms of iodine are not sufficiently understood, nor as thoroughly appreciated as they should be. It is tolerated by the stomach often, when no other preparations of its class can be, and does work that none other will. It is his favorite remedy in all asthmatic troubles, which generally yield promptly and effectually to it. It also produces most excellent results in cases of chronic bronchitis of long standing, and in such he has often observed that small doses, frequently repeated, are often of signal services, when larger doses do not seem to accomplish the same results. It has yielded very satisfactory and often surprising results in all forms of chronic lead poisoning, combined with saline cathartics and the faradic current. Excellent effects have also been obtained from its use in scrofulous diseases, especially of children. He is now using it in a case of obesity with the result of a steady diminution of the amount of fat without a single disagreeable symptom, or interference with the general health, or the action of any of the functions of the body. It has yielded its most magnificent and rapid results in all the latest stages and manifestations of syphilis. The general plan of administration is to begin with small doses of Gardiner's syrup, 15 drops, and gradually increase each dose by a drop until the point of toleration is reached.—*New Eng. Med. Monthly*, August, 1888.

Intrapleural Injections of Sterilized Air.—POTAIN has arrived at the following conclusions:

1. It is possible completely to evacuate the liquid of pleuritic effusion consecutive to pneumothorax on the condition of substituting for it sterilized air.
2. By being disengaged of all germs by its filtration through cotton, the air is deprived of injurious action and does not provoke any alteration of the pleuritic liquids.
3. This practice suppresses the grave dangers which result from the presence of a large quantity of liquid in the pleural cavity, or from the rapid evacuation of a great effusion.
4. It permits, on the other hand, the avoidance of serious inconveniences, and of frequently renewed punctures, and saves the lungs from the possibility of a new and progressive distention.
5. Finally by leaving for a long time the lungs of a patient in

repose and inactivity, the cicatrization and the definite cure of the tuberculous lesions are promoted.—*Lancet*, June 2, 1888.

Diabetes Mellitus.—PROFESSOR SEEGEN's paper "on diabetes mellitus in regard to recently acquired knowledge regarding sugar-formation in animals," published in the *Zeitschrift f. Klinische Medicin.*, Bd. xiii, presents the following propositions as the chief results of his investigations:

1. The formation of sugar is a normal process, going on in the liver uninterruptedly.
2. The daily amount of sugar formed in the liver is very considerable.
3. This sugar is constantly "converted" in the body, but where and in what way this occurs has not hitherto been explained.
4. Sugar or carbohydrates taken as nourishment do not participate in the formation of sugar within the liver.
5. Albumen and fats are the materials from which the liver forms sugar.
6. The formation of glycogen in contrast to liver-sugar is intimately related to the kind of nourishment taken, and is greatest when cane sugar is taken.

How do these facts agree with those derived from clinical observation of diabetes mellitus? The latter occurs in two forms; in the first of these (the light form,) the patients are usually well nourished belong to the middle period of life, and voracity, thirst, and polyuria are only seldom excessive; in the second, or severe form, the patients are usually young, lose flesh rapidly, and have great voracity and thirst, with an excessive amount of urine. The main distinction between these two forms lies in this, that patients of the first class only excrete sugar when they take sugar or carbohydrates in their food; the symptoms of diabetes cease when these are discontinued. In the second class of patients, the sugar excretion is scarcely influenced by the avoidance of carbohydrates in the food. Seegen is of the opinion that these two different forms represent two distinct pathological processes. In the first, the excreted sugar is derived undoubtedly from the sugar ingested, and the diabetes must be regarded as the result of incapacity of the liver cells to dispose of the carbohydrates in the normal manner. In the second form, it must be supposed that the normally formed liver-sugar is excreted. The whole body or more or less of its elements, has not

the capacity to "convert" the sugar conveyed in the blood; hence the graver prognosis in this form than in the other. The ultimate cause of diabetes is still unknown, but the author is of the opinion that nervous derangements very frequently underlie this disease.—*Brit. Med. Jour.*

Codeine to Relieve Abdominal Pain in Abdominal Disease.—DR. T. LAUDER BRUNTON was led by the conclusions of Gregory, Barbier and others with reference to manner of action of this drug, and by certain experiments tending to show that the abdominal pain of arsenic poisoning was entirely prevented by codeine, to try this remedy in cases of abdominal pain. To sum up, the results obtained by him from the administration of codeine has satisfied him that it has a powerful action in allaying abdominal pain, and it can be pushed to a much greater extent than morphine without causing drowsiness or interfering with the respiration or with the action of the bowels. It is, therefore, specially indicated in cases of cardiac dilatation and consolidation of the lung, conditions which cause one to be afraid of morphine. It is also specially indicated where one wishes to relieve the pain without interfering with the action of the bowels: on the other hand, in cases of malignant disease of the colon or rectum, the absence of any tendency to lessen peristaltic movement is rather a disadvantage to codeine as compared with morphine or opium. He has found that in cases of long-continued enteralgia without organic disease, it has continued to relieve pain for months together, without the dose being increased beyond one grain 3 times a day, and he found the same to be the case where the presence of a tumor in addition to their symptoms, had led to the diagnosis of malignant disease — *British Medical Journal*, June 9, 1888.

Simple Method of Preventing Sore-Throat.—H. VALENTINE KNAGGS recommends a simple prophylactic measure for cases of children or adults who are subject to recurrent sore throats or attacks of quinsy.

The treatment consists in simply placing round the neck ten to twenty threads of Berlin wool. This must be worn night and day except when taken off for purpose of making ablutions. In some cases it must be worn all the year round, in other cases only during the months when the complaint is likely to return. When it is to be discontinued, it should be done gradually by leaving off a single

thread each day until none are left. If the patient objects to the appearance a coin or a locket may be attached.

As explaining to some extent the favorable action of the wool in these cases, Dr. Knaggs suggests that the skein of wool thus attached around the neck, keeps up a belt of skin action and so acts continuously and in a slight degree as a mild counter-irritant—*Arch. of Pediat.*, Sept. 1888.

PHILADELPHIA HOSPITAL MIXTURES.

Mistura Alterans Comp.—Each teaspoonful contains:

Tr. xanthoxyli Amer., ℥x.

Ext. lappæ minoris fl.,

Ext. phytolaccae decand. fl.,

Ext. stillingiae fl., aa. ℥xv.

Ext. sarzæ co. q.s. ad. ℥j.

M. Dose, a teaspoonful.

Mistura Anticolica.—Each teaspoonful contains:

Tr. opii,

Tr. rhei,

Spts. menth. pip.,

Spts. camphoræ,

Spts. chloroformi,

Tr. capsici, aa. ℥v.,

Tr. catechu co., q.s. ad. ℥j.

M. Sig. Teaspoonful dose.

Mistura Antifebrilis.—Each tablespoonful contains

Morphiæ acetatis, gr. $\frac{1}{8}$,

Acidi acetici dil., ℥v.

Tr. aconiti, ℥iss, (=gtt. iij.)

Spts. etheris nitrosi,

Syrupi limonis, aa. ℥j.

Liq. ammon. acetat., q.s. ad ℥iv

M. Dose, a tablespoonful.

Mistura Expectorans.—Two teaspoonfuls contain:

Acid. hydrocyanici dil.,	- - - - -	℥j.
Spts. chloroformi,	- - - - -	℥v.
Acid. hydrobrom, (34%),	- - - - -	℥viiss.
Syr. senegæ,	- - - - -	℥xv.
Syr. scillæ	- - - - -	℥xv.
Syr. prun. Virg., q.s.ad	- - - - -	℥ij.

Dose. Two teaspoonfuls.

Mistura Ferri Aperiens.—Each tablespoonful contains:

Ferri sulph.,	- - - - -	gr.j.
Magnes. sulph.,	- - - - -	gr.xlv.
Acid. sulph. dil.,	- - - - -	℥viiss.
Inf. quassia, q.s.ad	- - - - -	℥iv.

Dose. Tablespoonful.—*Am. Jour. Pharm.*, June.

LINIMENTS OF THE PHILADELPHIA HOSPITAL.

Linimentum Aconiti.—

Tr. aconiti,	- - - - -	℥vj.
Chloroformi,	- - - - -	℥iv.
Spts. camphoræ,	- - - - -	℥iiss.
Liniment saponis, q.s.ad	- - - - -	℥vj. M.

Linimentum Chloroformi Co.

Chloroformi,	- - - - -	℥j.
Tr. aconiti,	- - - - -	
Aquæ ammoniæ, aa.	- - - - -	℥ss.
Olei lini, q.s.ad	- - - - -	℥vj. M.

Linimentum Terebinthinæ.—

R̄ Olei terebinthinæ,	- - - - -	℥vj.
Tr. capsici,	- - - - -	℥iv.
Olei lini,	- - - - -	℥ij.
Aquæ calcis, q.s.ad	- - - - -	℥vj. M.

Linimentum Terebinth Co.—

R̄ Olei terebinth,	
Aquæ ammoniæ, (17.5 %), aa.	℥j.,
Linimentum saponis, q.s.ad.	℥vj.

OBSTETRICS AND GYNECOLOGY.

BY E. M. NELSON, M. D.

Uterine Manifestations of Malaria.—M. le DR. LARDIER notes in the *Bul. Med. des Vosges* some little known manifestations of malaria. His studies show that in gestation and the puerperal state under the influence of malaria metrorrhagias are often produced, which yield very readily to the administration of sulphate of quinine. The recurrence of the menses occurs sometimes abnormally, the epochs are too near together: at other times the sanguineous flow is of extreme abundance. All these manifestations are, as a general rule, caused by the congestion of the abdominal viscera, in which the uterus participates in the same degree as the other viscera. The morbid phenomena, of which the uterus is the seat, are generally accompanied by other malarial manifestations, febrile or neuralgic.

During pregnancy malarial troubles are rare. Some manifestations of it are observed during the first months, but not during the last weeks of gestation. There exists during this period a sort of time of suspense, when the organic resistance of the woman, or the functional hyperactivity of the organ, contend against the morbid influence. Never has M. Lardier seen in his locality paludal intoxication cause abortion or premature labor. Never has the administration of sulphate of quinine in large doses against hemorrhagic troubles had emmenagogue or abortifacient effects. [Experience in the Mississippi Valley shows that malarial influences not infrequently cause abortion or premature labor, but the general opinion coincides with that of Dr. Lardier as to the action of quinine.]

The puerperal period is specially favorable to the development of malarial manifestations. The intoxication which has lain dormant during pregnancy takes a new course after the accouchement, which is displayed either by febrile symptoms (fevers of quotidian or tertian type, etc.) or by accidents having the uterus for their site (metrorrhagias, periodical uterine epistaxis, premature return of the menses, etc.). These uterine complications, even during the puerperal period, are habitually without gravity, and yield easily to the action of the sulphate of quinine. It is important that the physi-

cian be forewarned of their possibility in order to avoid errors of diagnosis.

During lactation, the nurse presents no special predisposition to paludal intoxication. We do not find in her the intensity of the accidents which we find during the puerperal period; but there is not the relative immunity found during pregnancy. Sometimes, however, nurses in a malarial locality are subject to a premature return of the menses.—*Jour. de Med. et de Chir.*, Aug. 1888.

Carbonic Acid in Vomiting of Pregnancy.—DR. A. ROSE has used successfully in several cases, and thinks well of, rectal injections of carbonic acid as a means of curing the distressing and sometimes dangerously exhausting vomiting attendant on pregnancy.

A simple but effective apparatus can be prepared from a wide-mouthed glass bottle, a perforated rubber stopper, a few feet of rubber tubing and a common rectal enema tube, which will answer every purpose.

The results which he reports certainly suggest further tests of the efficacy of this agent.—*Med. Rec.*, Aug. 18, 1888.

A Perfect Tampon.—DR. ROBERT T. MORRIS thinks the best vaginal tampon is made by winding surgeons' wool with several half hitches of thread into a loose elastic cylinder two or three inches in length and about an inch in diameter. This is then covered with a layer of absorbent cotton about a quarter of an inch thick, except at one end, where the wool is allowed to protrude a little. The cotton is then bound on with three four, or more half hitches of thread.

The tampon is then dipped into Wylie's solution (alum, ℥ij, boroglyceride, ℥i, glycerine, ℥iij), and introduced by means of a Sims' speculum and long forceps.

The elastic wool maintains the form of the tampon and prevents it from matting together as cotton alone would do, and acts as a drainage tube, for, being non-absorbent, it allows fluids to percolate freely through it. The end of wool protruding at the end rests just within the sphincter vaginæ, and being springy prevents it from slipping out.

The absorbent cotton covering holds the medicated solution in contact with the congested tissues and allows transmission of discharges to the wool center.—*Med. Rec.*, Aug. 18.

[A tampon which has been much in use here is composed of a centre of prepared tow or jute covered with absorbent cotton in the same way described by Dr. Morris. ED.]

Anesthetics for the First Stage of Labor.—EGBERT H. GRANDIN says: "In chloral we possess a most valuable means of taking the edge off the pains and of regulating their rhythm, but the woman's suffering during the acme of the pains is still intense, and we often wish we had an adjuvant to the chloral which, whilst nullifying none of its effects, would render the contractions practically painless." During the past year he has been testing antipyrine in these cases with satisfactory results. He gives fifteen grains well diluted and preferably with some stimulant, such as the aromatic spirits of ammonia, and repeats the dose in one hour. Two hours after the second and every two hours, if needed, he gives ten grains of the antipyrine. Chloral he administers in fifteen-grain doses every three-quarters of an hour until three or four doses have been taken. By this combination he has found the pain in two instances to be scarcely perceptible, and in others simply uncomfortable.—*N. Y. Med. Jour.*, July 14, 1888.

Imperfect Uterine Retraction Post Partum.—DR. EDWARD REYNOLDS reports a case of labor in which, besides other complications, there was the following condition after the birth of the child:

The uterus, though firm, was very large, and a moderate hemorrhage at once started up. The placenta was extracted manually, and the uterus was found to be in a condition of firm contraction, with but little reaction; that is, the uterine walls were firm and thick, the anterior and posterior walls lying in contact, but the intra-uterine space was more than large enough to contain the expanded hand. Moderate hemorrhage continued, which was not controlled by the introduction of ice nor by the injection of hot water. Massage between one hand upon the abdomen and the other in the vagina in a few minutes caused satisfactory retraction and contraction, with cessation of the hemorrhage.

Dr. Reynolds thinks that this rare condition was first described by Dr. Matthews Duncan in the *London Lancet*, Oct. 15, 1887. It is probably associated, as a rule, with previous extreme distention of the uterus.—*Bost. Med. Jour.*, July 12, 1888.

Perforation of Perineum during Labor.—JAS. FERGUSON reports two cases of this rather uncommon form of perineal laceration. In the first case, the patient being a primipara, the child was driven through the perforation, which involved the sphincter ani, and was separated by nearly an inch of sound skin from the vagina. The posterior vaginal wall was torn for an inch and a half upwards. Two sutures in the vaginal wall and half a dozen in the perineum were introduced. The bowels were kept constipated with opium until the ninth day. Union took place by first intention. By the twenty-first day the patient could walk about, and said she felt no pain. This accident was attributed to an unusual depth (three inches) of the symphysis and undue narrowness of the pubic arch. The other case was that of a multipara who had suffered from an extensive laceration in a preceding labor which was not recognized or was neglected. A firm cicatrix resulting from that interfered with the normal course of this labor. Perforation took place, but by the prompt and skilful application of the forceps the delivery took place by the natural passage. The sphincter was not torn through; and in this case, as in the preceding, the result of suturing was a healing by first intention.—*Brit. Med. Jour.*, July 21, '88.

Hydrastis Canadensis in Hemorrhage from Fibro-Myomata.—H. T. RUTHERFORD reports five cases as illustrative of the hemostatic power of *hydrastis Canadensis* in cases of uterine hemorrhage from fibro myomata. He thinks that its effects are far superior to those of ergot in these cases.—*Brit. Med. Jour.*, July 21, 1888.

Remarkable Fecundity.—A woman named Aumont, in St. Julien de Varaville, recently gave birth to five children, three on June 4 and two more on June 5. The children, four boys and one girl, lived several days. This was Madame Aumont's fourth confinement. At the first she bore a daughter, at the second two daughters, at the third three sons.—*Brit. Med. Jour.*, July 21, 1888.

OTOLOGY.

BY M. D. JONES, M. D.

Deafness the Result of Syphilis.—DR. TURNBULL at the close of a paper draws the following conclusions: In almost all constitu-

tional syphilitic diseases of the ear in children and young persons, there is some disorder of the eyes, throat and nose. The deafness that follows improvement of the eyes, is often profound. Bone conduction for the tuning-fork is apt to be very bad. Often the first indication of a syphilitic diseased ear is a primary ulcer in the throat, naso-pharynx, or in the auditory canal. Purulent otitis media may occur in utero, or in very young infants, while in older persons there may be congestion of the tympanic mucous membrane from the same cause, and ankylosis of the bones of the ear, with bands of adhesion in the middle ear. The labyrinth, semi-circular canals, and cochlea, may be jointly or severally affected; also hyperemia or thickening, or dryness of the membranes of the round and oval windows. There is a disease of a syphilitic nature of the auditory nerve, and of the brain itself. This is most successfully treated by the combined use of pilocarpine and mercury. Care must be taken in using these powerful drugs, as there are cases on record of poisoning from jaborandi and pilocarpin. In both the symptoms were, profuse perspiration and salivation, dimness of sight, prostration, cold tremors and extreme general debility.

Atropine given hypodermically is the antidote for pilocarpine poisoning.—*Phil. Med. Times*, Sept. 1, 1888.

Otitis Media Acuta from Use of Buttles' Inhaler.—DR. RING records four such cases. A boy, æt. five years, was treated for chronic suppuration of the right ear. The part was cleansed with warm water and peroxide of hydrogen and the ear inflated. He was treated the following day, and again four days later. At the latter visit a spray was used to the naso-pharynx and the ear inflated, using the Buttles-Rossa bulb. Some granulations were curetted from the meatus. That night an acute inflammation of the sound ear set in, followed speedily by suppuration. The author reviews the drugs and instruments used in his four unfortunate cases, and finds the cause of the mischief in the Buttles' bulb he attached to his Politzer bag. The water used in the office was kept in an iron tank. In testing patient number one, some mucus was drawn up into the nozzle of the bulb; and water from this tank, containing a good deal of sediment, was used to wash the sponge held by the bulb.

The question then arose, what is there in the sediment of Croton water, which after evaporation, will set up acute aural catarrh.—*N. Y. Med. Rec.*, August 11, 1888.

Lactic Acid in Chronic Suppurative Otitis.—DR. BERMANN re-cites his observations of the use of this remedy on the Continent, and his own experience with it which has been very happy. After experimenting he finds a thin coating of paraffine over the meatus, the best to prevent the corrosive action, and so allowing a 40 per cent solution to be used without any discomfort. It is well, however, to begin with a weak solution and increase the strength gradually.—*Jour. of the A. M. A.*, Aug. 11, 1888.

Post-Nasal Growths and their Relation to Diseases of the Middle Ear.—DR. BRONNER says these are spoken of as advanced vegetations, and hypertrophy of the pharyngeal tonsil, but there is no physiological difference between them. The symptoms caused by these growths are characteristic. The child is usually badly nourished, with a retracted thorax and pinched nose, it breathes with its mouth open, and has a peculiar, dull expression. The voice has a nasal twang, and breathing through the nose is difficult. The growths can be easily felt with the finger passed behind the soft palate.

In nearly all cases there is a history of recurrent middle ear trouble. Hartman's ring-shaped curette is the best for their removal and requires no anesthetic.

Meyer examined 2,000 school children, and found 1 per cent had these growths. Also 700 children from an orphanage gave him 2 per cent affected.

Prof. Doyen found 5 per cent in 4000 children at Leyden. Meyer found in 198 cases of middle ear diseases in children under 15 years of age, 50 per cent had these post-nasal growths. Of 242 children with middle ear trouble 40 per cent had the growths. Schmiegelsner reports that in 119 such cases 84 per cent had middle ear trouble.

Such facts prove the importance of examining the naso-pharynx in all children with middle ear disease. In adults other diseases of the naso-pharynx are more frequent, and in their way are just as important for treatment of diseases of the middle ear, as post-nasal growths are in children. *Brit. Med. Jour.*, July 14, 1888.

Auricular Epilepsy.—That irritation of the sensory nerves may provoke an attack of convulsions, or loss of consciousness, or, indeed any other morbid nervous phenomenon, must be admitted sometimes even without the qualification, that the central nervous

ganglia are in a particularly irritable condition. There seems plenty of ground for believing that nervous attacks, not necessarily of the typical character, but resembling Ménière's disease may proceed from auricular irritation. Boucheron has attributed some of these attacks to excitation of the acoustic nerve, resulting from labyrinthine compression (otopoesis) secondary to absorption of the air from the cavity of the tympanum, often due to obstruction of the Eustachian tube.

Insufflation of the tampanic cavity has relieved this pressure, and led to the diappearance of the epileptic phenomena. Boucheron thinks such cases are of common occurrence, and that they co exist with slight or gross lesions of the auditory nerve.—*N. Y. Med. Jour.*, Oct. 13, 1888.

DISEASES OF THE CHEST AND THROAT.

BY WM. TOWNSEND PORTER, *Professor of Physiology, and Lecturer on Diseases of the Throat in the St. Louis Medical College.*

Contagion of Pneumonia.—It was a fancy of Wunderlich's to say that if we could see the lungs as we see the skin, we would have as many varieties of pneumonia as of eczema. Certainly the researches of the last few years into the causes of pneumonia have not tended to prove the unity of its causation, while all the weight of evidence goes to prove that a variety of micro-organisms, of widely different orders, may produce pneumonias histologically similar.

After a very thorough study (*Arch. Gén. de Méd.*, Juillet, 1888), Netter concludes that pneumonia is a transmissible, contagious disease. The contagion is due to specific, pathogenic micro-organisms, which multiply in the diseased focus, and which, leaving the body in various ways, are especially abundant in the products of expectoration. Contagion from the sick is still possible, long after recovery, and for two reasons. The first is, the contagion resists dessication, and may thus preserve its activity outside the body on indifferent substances to which it adheres. The second reason is that the contagion is not destroyed in the patient after the termination of the disease, as are most infectious germs.

Long after recovery, perhaps indefinitely, the subjects of the disease have in their mouths active germs, and this activity explains the great number of recurrences in pneumonia and the occurrence of multiple outbreaks in one family or house. The bearing of these views, if correct, on prophylaxis is of prime importance.

Netter does not believe that a rigorous isolation is necessary in pneumonia. The relatives should not be permitted to pass the night in the same room, much less occupy the same bed. The danger of the well using the handkerchief of the sick, or *vice versa*, is not entirely imaginary. In hospitals, cases of pneumonia should not be in small wards, or, if so, should at least be alone. The contagion is but feebly diffusible, and all the cases published show that contagion is especially liable to occur in small rooms badly aired. It is particularly necessary to avoid exposing patients with typhoid fever, acute exanthemata, acute affections of the respiratory tract, nephritis and diabetes to the danger of pneumonia. The tuberculizing influence of hospitalism in these diseases is well recognized, and it is quite as true that the diseases named favor the development of pneumonia.

The sputa, being the habitual if not the only vehicle of contagion, must be disinfected. So far as our present knowledge goes, corrosive sublimate is the best means we have for this purpose. In hospitals having disinfecting apparatus the clothing and linen of cases of pneumonia should be submitted to the same process as in other contagious diseases. These views we believe to express all that can at this time be safely concluded from the study of the microbic origin of pneumonia.—*Med. News*, Aug. 18.

Surgical Irritation of Non-Malignant Growths in the Larynx.—The July number of the *Internationale Centralblatt f. Laryngologie* contains the results of an investigation by Dr. F. Semon of the transformation of benign into malignant growths of the larynx, as a consequence of irritation from surgical instruments. The author collected 10,747 cases of benign neoplasms, 8216 of which underwent intra-laryngeal operation. In the whole series of 8,216 operations there was an *apparent* change from innocence to malignancy in only 32 cases, or about 0.5 per cent of the whole number. Of these there was some recognized element of doubt in no fewer than 16; and it is obvious that the remaining half might possibly

be still further reduced if all the facts in each case could be fully known. Making all allowances for the possible fallacies inherent in statistics relative to a subject which presents many difficulties to the enquirer, it certainly seems that this exhaustive investigation finally disposes of a question which has been much debated of late.—*Brit. Med. Jour.*

Reflex Influences in the Production of Naso Pharyngeal Catarrh. DR. ALBERT H. BUCK (*Med. Record*, Aug. 18, 1888) calls attention to those comparatively remote exciting causes of naso pharyngeal catarrh which act, so far as we are able to-day to explain the mechanism of their action, through the intervention of the vaso-motor fibres of the sympathetic nerve. Of the direct exciting causes of naso-pharyngeal catarrh we know very little. Certain kinds of dust and smoke, the pollen of certain plants, the decomposing secretions of the parts themselves or of adjacent organs, and, to a certain extent, the direct influence of heat, cold and moisture upon the parts comprise very nearly the entire list of the direct causes known to us. Of the indirect causes acting through the vaso-motor nerves, the commonest and best known is chilling of the surface of the body. If we might believe certain English and American authorities, affections of the teeth should rank next to chill in order of frequency. This does not agree with the author's experience. The fact is that we do not yet possess such trustworthy data in regard to the relative frequency of these indirect causes that we can venture thus to classify them.

Irritation of the gastro-intestinal tract is, in not a few cases, a very strong exciting cause of naso-pharyngeal catarrh and of all the aural disturbances growing out of such a catarrh. A patient under his observation suffered with chronic naso-pharyngeal catarrh, and observed that whenever he indulged in certain articles of food he would experience abdominal discomfort, and at the same time a marked exacerbation of his naso-pharyngeal catarrh. This case, Dr. Buck thinks, affords unmistakable evidence that an irritation of the small intestine may, in the presence of a pre-existing naso-pharyngeal catarrh, excite that affection to greatly increased activity. There are many individuals in whom we have every reason for believing that the gastro-intestinal tract is habitually in a state of greater or less irritation. These persons are usually men between the ages of forty and sixty, and it is a very common ex-

perience in such men to find the faucial mucous membrane red and swollen. Can we entertain any reasonable doubt in these cases that we are dealing with a naso-pharyngeal catarrh of reflex origin, and that the underlying disease which claims our chief attention as therapeutists is the gastro-intestinal affection.

Reflex influences involving the vault of the pharynx and the sac may emanate from still more remote organs. A lady, æt. 40, had naso-pharyngeal catarrh and distressing tinnitus together with retroversion of the uterus and parametritis. The catarrh of the naso pharynx and the tinnitus disappeared on the cure of the uterine disease.

The Frequent Dependence of Persistent and so-called Congestive Headache upon Abnormal Conditions of the Nasal Passages.—Dr. JOHN O. ROE, of Rochester, N. Y., writes as follows: A headache is in every instance a warning of some disease or degeneration that should be sought out and corrected. The connection between abnormal conditions of the nasal passages and certain forms of headache was recognized a long time before we had any definite knowledge concerning disease of the nose. These were the “catarrhal” headaches, associated with, or caused by an engorged condition of the nasal passages. Headaches caused by chronic abnormal conditions of the nasal passages, in which the nasal derangement played a less conspicuous part, were sometimes attributed to other causes, and the nasal disease was entirely overlooked or unsuspected. In diseases of the nose, not only are the well-known offices which it performs interfered with, but derangements are produced in other organs and parts. Such derangements may be the effect of the irritation that is reflected from the nose to other parts through its abundant nervous connections.

An impetus was given to the study of nasal neuroses when it was shown that nearly all the phenomena attending hay fever were reflected irritations from the nose; and also that many other neuroses, such as megrim, facial spasm, choreic symptoms, epileptiform seizure, sneezing cough, laryngeal spasm and asthma, were frequently excited by disease in the nasal chambers.

The exciting cause of nasal headache is an irritation of the terminal nerve-filaments in the nasal chambers, which excites an undue activity in the communicating ganglion, and from which an irritation is reflected to the terminating filaments of other communicating

nerves. The exceptions to this statement are where the pain occurring directly over the frontal sinuses is due to the disease of these sinuses, or to the accumulation of mucous discharges, or secretion from obstruction of their outlets by hypertrophic rhinitis, etc., or where the pain is caused by the direct extension of disease from the nasal cavity to the meninges and brain (rare). The undue activity in the sympathetic ganglia, spoken of above, also causes a dilatation of the smaller vessels and the capillaries, and a greatly increased vascularity of the part takes place, which, being associated with the head pain, is recognized as a congestive headache.

It is in this manner that other well-recognized headaches, due to irritation reflected from distant parts and organs, are caused; as for instance those due to uterine irritation, and most commonly expressed by a vertex pain; those excited by derangements of the stomach, causing irritation of the gastric plexus of the sympathetic, and reflected to the frontal region; and those due to eye strain, and manifested by pain in the region of the orbit and temple.

In the nose the irritation is occasioned by some abnormal condition which brings together parts that normally should be separate, and produces more or less pressure between them. Many examples are given by the author, as the case of Mrs. G., who had severe headache with impairment of general health, and recovered at once upon the removal of a portion of an hypertrophied turbinated body which pressed upon the septum. In no case of headache, either temporary or persistent, excited by nasal irritation, had he failed to find the irritation to be due to such pressure in some portion of the nasal chambers. He would except polypoid or other growths in the nose, which will produce pressure, and frequently severe headaches, but in such cases the parts are forcibly separated. This pressure may be constant, or only during the period of temporary engorgement of the soft parts which brings them forcibly together or against the septum.

When one wall of a nasal passage comes in contact with its opposite wall, sooner or later the resulting irritation causes a sensitiveness and thickening of the tissues of the latter side.

Character and Direction of the Pain.—The character of the pain varies from a dull, heavy ache, like that from undue pressure to a sharp pain like that characteristic of neuralgia. The pain also may be intermittent and more or less transient, recurring at frequent, and, it may be, regular intervals, or it may be persistent or nearly continuous,

In the latter case it is, as a rule, due to a constant pressure between parts that are found to be bony or composed of more or less firm tissue; while in cases of transient pains the pressure is between soft tissues, and on the subsidence of the engorgement the parts separate and the pain disappears. Whatever cause engorges the nasal vessels may bring on headache by creating intra-nasal pressure.

The location of the pains in the head has no constant relation to the disease nor to its seat in the nose, and it has no such relation to the distribution of the nerves or blood-vessels. Notwithstanding the fact that the location of the pain in the head bears no constant relation to the location of the disease in the nose, it is observed that from certain portions of the nasal chamber pain is more often reflected to certain regions of the head than to other regions. Thus from the inferior turbinated body and lower portion of the septum, the pain is most often reflected to the lower and posterior portion of the temporal, parietal, and occipital bones.

The pain reflected from the region of the middle turbinated bone is commonly referred to the temple, sometimes invading the whole region from the nose to the parietal eminence, and extending to the vertex; while pain reflected from the region of the superior turbinated bone is commonly felt in the frontal and supra-orbital regions. Sometimes the pain will completely surround the eye, or be centered in the back of the eyeball.

Diagnosis.—In case the headache is associated with pronounced nasal irritation, and there is an absence of any other pronounced cause, such as gastric disturbance, eye strain, uterine and renal disease, rheumatic and lithemic affections, or the effects of drugs, such as cocaine and sometimes quinine, we have presumption that the headache originates in the nose. If we see evidence of one or more of the various diseased conditions in the nose already described, that may be the cause of headache, we should carefully explore the part with a probe. Usually the slightest touch of the probe against the offending part will provoke the characteristic head pain.

The Treatment of headaches dependent on intra-nasal disease consists in the removal of the cause, and the restoration of the nose to a normal condition. Dr. Glasgow of St. Louis, relieves "congestive headache" by pricking the engorged turbinated bodies and withdrawing from a drachm to several ounces of blood.—*Med. Rec.* Aug. 25.

SOCIETY PROCEEDINGS.

ST. LOUIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

Stated meeting, Oct. 18, 1888, the Vice-President, G. J. ENGELMANN, in the chair.

OVARIAN TUMOR AND PREGNANCY.

Dr. Prewitt.—I never, until recently, met with a case of ovarian tumor, complicated with pregnancy, which required operation. My ideas of the relationship of the ovarian tumor and uterus under such circumstances were that the ovarian tumor would be rather above and to one side of the pregnant uterus. In the case which I saw recently, however, the tumor was down in the pelvis and the uterus above the tumor pushed up out of the pelvis so the cervix could hardly be reached with my finger. I could not palpate so as to tell what sort of a tumor it was. It felt pretty hard, but a cystic tumor will feel hard if you can not use bimanual palpation. The only history that I got in the case was the statement of the physician who saw the patient in north Missouri, that he thought there was a tumor, and that possibly the patient was pregnant, but he was not certain about it. Later he sent a statement that she was probably pregnant. I was at a loss to know whether it was an ovarian tumor, or a tumor growing from the broad ligament or connected with the walls of the pelvis, or where it sprang from. It seemed to me from the preconceived ideas I had about the relative positions of the tumor and uterus that it was probably something else than an ovarian tumor. My first impression was that it was probably adherent to the walls of the pelvis and that that would account for the fact that it had remained in the pelvis while the uterus was pushed out. It was certain that the woman could not be delivered unless the tumor was removed. She was then five

months pregnant, and the question arose whether to allow her to go on to full term and do Cesarean section, perhaps, and attempt to remove the tumor at that time, or to attempt to empty the womb then and bring on a miscarriage, or to attempt an operation for the removal of the tumor. After thinking over the matter I concluded to make an exploratory laparotomy at all events, but before doing so to learn, as far as possible, the character of the tumor and whether it was attached to the structures of the pelvis or not. So I placed the woman on her hands and knees, in the knee-chest position, and attempted to push the tumor upward and determine the degree of mobility. I have seen several tumors that could not be moved out of the pelvic cavity at all. At the first effort I thought the tumor altered its position a little. Not wishing to do too much, I waited until the next day, when I used considerable pressure and was satisfied that I moved it some; then I waited, perhaps two days, and tried it again, and moved it up pretty well out of the pelvis, but I found that it carried the uterus with it, so I could not reach the cervix from behind the pubes. I was pretty well convinced that it was not adherent to the walls of the pelvis, so I concluded that we were pretty safe in operating and performing an exploratory laparotomy with a good prospect of getting the tumor out. On Friday, I think it was, I concluded to make another exploratory examination and attempt to determine how much mobility there was to the tumor. So I put the woman in the knee elbow position and pressed pretty firmly—not as firmly as I had before, however—and I felt something give way. I could not tell whether it was a cyst wall or a solid mass that gave way. It felt to me more as though it had been a soft solid, friable mass. It aroused some little feeling of anxiety in my mind, because, I said, if this is an ovarian tumor with fluid in it, there will probably be irritation, and I will probably have a peritonitis, which will be a pretty serious matter, so I concluded to watch it until the next morning. The next day I found that she suffered no pain, although she felt sick and vomited some; there was no tenderness about the parts, but she said the swelling had gone down. On the next day we operated and found an ovarian tumor down in the pelvis and a lot of fluid in the pelvic cavity. I dragged the tumor out, cut it off, took out the fluid as well as possible, tied the pedicle and cut it off. There was a good deal of difficulty in getting the fluid out of the belly, and to do so I had to take out the uterus,

which was wrapped in a warm cloth, then sponged out the cavity and put the uterus back and sewed up the wound. She got along without any trouble. I found upon examination that I had pushed my finger through the wall of the tumor. The fluid had escaped, but was evidently bland.

Dr. E. H. Gregory.—It is natural for me to ask myself at this point, what would I have done under the circumstances? And I think I should have let the tumor alone. The woman was doing very well; there were no urgent symptoms, and my inclination, with my conservatism, would have been decidedly to let her alone. Not that I mean to intimate that the doctor did wrong; I would not have that understood for an instant—but merely that with my conservative ideas I am inclined to let such cases alone. There are a good many cases on record where ovarian cysts have ruptured and the parties have recovered without any bad symptoms and without a recurrence of the trouble. I should have acted upon that as a basis, and should have had the condition of the patient to re-enforce my action. So I do not think I should have been inclined to take the risk of a laparotomy under the circumstances. The question is whether the woman would not have gotten along quite as well without the laparotomy as with it.

Dr. Prewitt.—In reply to Dr. Gregory I will state that we discussed the question whether it would be better to let her alone or to perform laparotomy. It occurred to me that the tumor was not completely empty; then, too, I did not know whether it was a single cyst or a multiple one.

Dr. Engelmann.—How large was the tumor after the rupture?

Dr. Prewitt.—Do you mean how large was the sac?

Dr. Engelmann.—You say it was not completely emptied.

Dr. Prewitt.—Oh, the sac was as big as a cocoanut; it was much larger before the rupture. I discussed the propriety of letting her alone, and debated whether it would be better to let her go to full term or not. It was certain that this mass in the pelvis would have interfered with labor; and it was possible that it was a multiple cyst. I thought there might be other cysts in there that did not contain this bland fluid, and it was possible that in the progress of the pregnancy or labor these cysts might be ruptured and very distressing consequences might follow, that the fluid which escaped might give rise to peritonitis and cause adhesions of the sac, and in that way produce a far more formidable condition to

deal with, as the adhesions would complicate matters very much; so it occurred to me that the only safe thing to do was to perform laparotomy, and the result was satisfactory.

Dr. Engelmann.—The propriety of an operation would depend very much upon the condition of the patient at the time, whether she showed any symptoms previous to the rupture requiring operation, whether her condition was improved after the rupture and whether the pulse and temperature showed any indications of more serious conditions.

Dr. Prewitt.—The rupture of the tumor caused a certain amount of distress; she was sick, and vomited; still there was no marked tenderness.

Dr. Gregory.—It seems to me that the doctor's position is a very good one, and the result in his case is certainly all that could be desired. I simply say that under the circumstances I think I should have waited. One of the most interesting points in the doctor's case is the fact, that the escaped fluid caused no disturbance. It has been generally believed that the fluid from these cysts was most dangerous, that tenacious, glue-like fluid of which he speaks, whereas this proved to be a bland one. I expected that the doctor would state, when he got to that point, that there was such a degree of urgency in the symptoms that he was compelled to open the abdomen: instead of that he declares there were no urgent symptoms at all; the woman felt herself relieved; the swelling had gone down.

Dr. Engelmann.—In regard to the fluid, it has been considered very dangerous, as Dr. Gregory states, but I have seen this same sort of bland fluid from these cysts. Of course one would be justified in waiting in such a case, but the doctor's course must depend a good deal upon the result of his examination and the condition of the pedicle.

Dr. Prewitt.—About a month ago I operated on another case where the tumor presented the ordinary characteristics of an ovarian tumor; there was no pregnancy in this case; but below the tumor and between the mass of the tumor and the pubes was a fluctuating space that was quite peculiar, and it puzzled me considerably; it did not strike me that it was like the ordinary ovarian tumor; it was in the median line and then below it was this mass of fluctuating fluid. I operated and found the pelvis filled with a ropy fluid exactly like that which came out of this tumor; at least

it looked exactly the same. I washed out the abdominal cavity with pure water and the patient recovered without trouble.

Dr. McPheeters.—How long has it been since you operated?

Dr. Prewitt.—A month or two. The patient whose case I reported first told me that she had had some trouble at her last confinement, that labor had been delayed and extremely protracted and troublesome, but she had never had any trouble in her labors before. It occurred to me that perhaps this tumor was then present, although not being large it escaped detection. The patient did not abort and is doing well. I do not know what the text books state in relation to the relative position of a tumor to the pregnant uterus, but it struck me that this case was a little peculiar.

Dr. Boisliniere.—What does Spencer Wells say? He has had such cases.

Dr. Engelmann.—Spencer Wells relates some few cases, but within the last few years it has been more common to operate during pregnancy. The subject is mentioned by other writers.

Dr. Prewitt.—I have Smith's work on abdominal operations and one or two other works on the subject, and I have never seen it mentioned or discussed. We know that one of the characteristic features of ovarian tumor is that it rises above the brim of the pelvis and takes the uterus with it.

Dr. Gregory.—Fibroids displace the uterus much more often than ovarian tumors. I have often seen cases of fibroids in which I could not find the os. Whenever I find a tumor which occupies an unnatural position, so that I am in doubt of it, I think it is not a fibroid but an ovarian tumor. Whenever I have had to deal with fibroids, there has usually been coincident with them a displacement of the uterus so I could not find the os.

Dr. Prewitt.—Fibroids are not the only tumors that displace the uterus.

Dr. Gregory.—It has been my experience in regard to fibroids and ovarian tumors, that the latter displace the uterus very little; the former almost always dislocate the womb.

Dr. Boisliniere.—A lady came to see me about three years ago with a large tumor extending up to the umbilicus, and of course the uterus was very high, and she became pregnant. I received a letter from her husband saying that she was safely delivered.

Dr. Engelmann.—Fibroids are so variable in their position that

it is much more likely labor can be completed with a fibroid favorably situated than with an ovarian tumor. I have seen two patients and perhaps more in which there was this complication; in one of them the tumor was double the size of that, and it did not affect the parturition at all.

Dr. Gregory.—Dr. Boisliniere doubtless remembers the case of the doctor's wife who had an ovarian tumor. It was in those days when we were not so ready to operate, and we tapped her. She returned afterwards, and was then pregnant and the pregnancy was progressing favorably, but we had to tap her again. She was delivered, and three or four years afterwards returned and had the tumor removed.

ENORMOUS SARCOMA.

I will report a case which I saw a short time since. The sisters opened a new hospital in Alton, and the first case that entered the hospital was one of an abdominal tumor. The patient had waited a number of months for the hospital to be opened so that she might be treated there. Dr. Gulick came to me and asked me to go to Alton and be present at the operation on this patient. As it was the first case that had been operated on at the hospital they were anxious that it should be a success. Of course I went at the appointed day. All preparations had been made. Dr. Haskell, Dr. Gulick and Dr. Yerker, three very intelligent men had made all necessary arrangements. I found the tumor was an immense thing, so that the woman could hardly breathe. Dr. Gulick had told me when he came to see me and make arrangements for the operation that if the patient's breathing became too bad before the time fixed for the operation, he would tap her, but he had not done this. The patient was placed on the table; but she could not lie on her back, because when she did so she quit breathing, so she was laid on her side. I palpated and then percussed, and I said gentlemen here is resonance above the tumor, extending high up, there must be a coil of intestine here. They agreed with me, so I made my incision so as to avoid this. I got my hand into the abdomen and found the intestine adherent to the tumor in front and two or three inches above the pubes. I exposed the tumor by extending my incision upward, and then tapped the tumor. I thrust in the usual trocar with a great deal of difficulty; then the trocar stopped. I redoubled my efforts and forced it into the mass. I withdrew the tro-

car and no fluid came. I enlarged the incision into the mass and and put my fingers in and found it was solid as far as I could reach and strange to say, there was very little hemorrhage. By this time it was necessary to use brandy injection to keep the patient alive. I was satisfied that it would be impossible to remove this large mass without the patient dying on the table; so I closed up the abdomen. I worried a great deal about the case after I got back home, and seeing Spencer Wells' book on the shelf, I took it down, and I found an ovarian tumor represented with a hand in it which looked as if it was trying to tear out the mass, and it occurred to me that perhaps I had made a mistake and had not gone far enough; that I had doomed the woman, as she was bound to die with the tumor in her abdomen. I worried myself to death for about six weeks, when the patient died and Dr. Gulick brought me the mass in a tin cannister three feet high. He had taken the tumor out after the woman was dead. I cut into the mass and found it was solid throughout. Then I began to feel more comfortable. I realized that it would have been impossible to remove it. I presented the specimen to the St. Louis Medical Society and some of the members criticised me for not taking out the tumor so long as I had commenced the operation. The tumor was dissected and a kidney was found in it. It was not an ovarian tumor, but a tumor that had grown from the connective tissue in the renal space and as it grew it had embraced the kidney, the kidney being pushed up. The sarcoma had actually grown behind the kidney and pushed the kidney up and enveloped it, then went on increasing until it filled the entire abdomen.

Dr. Prewitt.—What was the character of the pedicle.

Dr. Gregory.—There was no pedicle at all. It would have been impossible to remove the tumor without killing the patient.

Dr. Engelmann.—In England and Germany, where it has become known to the people that abdominal tumors can be readily removed, they have much better results with their ovariectomies and laparotomies. The patients come for operation at an earlier stage, and they do not see such masses as we meet with here; what they see are comparatively small tumors.

Dr. Gregory.—I think this case would have defied surgery from the beginning; it had been growing for three years.

Dr. Engelmann.—Why would it not be as easy to remove such a tumor in its early stages as a kidney?

Dr. Gregory.—In its early stages it might be, but after it had come to be diagnosed as an abdominal tumor it was hardly possible.

Dr. Prewitt.—Thomas, of New York, reports a case which he took for an ovarian tumor, but which he found on opening the abdomen was a hydronephrosis, and the patient got well. There could not have been any well defined pedicle, because it grew from behind the peritoneum and must have gone forwards. In this case if the tumor had been comparatively small, I do not know whether it could have been removed.

Dr. Gregory.—Before it was possible to diagnose it, it would have been pretty large.

DISLOCATION OF COCCYX.

Dr. Gehring.—I should like to report a case of dislocation of the coccyx in an acute form. The rarity of the case consists, I think, in the fact that it was seen in the acute stage. It can not be called fracture of the coccyx, because there is no rubbing between the bones, but the coccyx is floating, being severed from the sacral attachment. The patient fell on the steps of her house and after that she had those difficulties which are usually found in these coccygeal troubles; she suffered pain on sitting down or rising. On examination I found the coccyx floating, apparently entirely severed from the sacral attachment and perfectly movable. It was not probably a fracture but a dislocation with ligamentous rupture. I mention this case, not because they are rare, as doubtless all the gentlemen have seen such cases, but I was particularly interested in the treatment. It is apparently a trivial trouble, and yet it causes a great deal of annoyance and is very difficult to handle, and the question is, shall it be handled surgically, or is there any other means of relieving or curing such a case. I found that by a light pressure, either through the rectum or vagina, I could bring it in line with the sacral extremity, but the difficulty was to hold it there. On account of the facility with which it could be replaced I tried to keep it in place with a vaginal tampon, and having done so the patient felt perfectly comfortable in walking, riding or sitting down, and after several days of this treatment she feels perfectly comfortable. Now the question is shall I continue this treatment and see whether adhesions will take place, or would it be better to interfere at once by surgical operation and remove the coc-

cyx so as to prevent those consequences which are usually found to follow this apparently trivial accident, such as spasm of the bladder and rectal difficulties.

Dr. Gregory.—I think you did exactly right. I think I should have attempted to replace the bone and keep it in position, and if I failed I would then operate.

Dr. Gehring.—I think a few weeks trial will do no harm. The removal of the bone is possible at any stage of the trouble. There is a point that suggests itself to me which might be well to bear in mind should it be necessary to operate in the case, that is in operating to simply sever the muscles from the bone—it has been a subject of some discussion whether in these cases it is better to remove the bone entirely or simply sever the ligamentous attachments completely and instead of severing it from the muscles leave it attached to a certain portion of the muscular floor and let it float, provided its nutrition will be kept up.

Dr. Previtt.—What trouble would you anticipate from the removal of the bone? It is partially severed in its articulation with the sacrum; it moves very freely. The soreness and irritation connected with the injury may cause reflex irritation of the rectum and bladder, and it may even cause cystitis; so that trivial as the thing looks in itself, when you have to deal with it, it becomes quite formidable. I think it worth while to have the matter discussed, especially as to the plan of treatment to be pursued on the one hand or other.

Dr. Engelmann.—The doctor has relieved the pain by replacing the coccyx and holding it in place with tampons, and his patient is comfortable, and possibly if he continues that treatment it may adapt itself to the proper location. And, as Dr. Gregory says, if it does not do that, if the dangers which occasionally accompany the trouble threaten, he can operate and remove the bone. I do not think the method of severing the attachments and allowing the bone to remain has proven very satisfactory.

Dr. Gregory.—That was originated by Simpson, of Edinburgh; he first practiced cutting the tissue away from the coccyx in coccygodynia.

Dr. Gehring.—Where the bone is removed you leave the muscles floating without any attachment so that they have no support. What I suggested was whether it would not be preferable to simply detach the ligamentous attachment and leave the muscular at-

tachments. What do we gain by removing the bone? I think it would probably be better to sever the ligamentous attachments and let the bone hang.

Dr. Gregory.—I think the best plan is the one Dr. Gehrung has adopted, of replacing the bone and holding it in place to see whether adhesions will not again form.

Dr. G. A. Moses.—I attended a patient in confinement who had a movable coccyx; it stood at right angles and was painful. I afterwards attended her in several other confinements, and the coccyx was still at right angles.

Dr. Engelmann.—I have had just such a case, where the patient slipped on some steps and the coccyx was dislocated; that is it was movable, but it was brought back to its normal position and held by its own attachments. I would like to ask the opinion of the gentlemen in regard to a similar case. A lady whom I confined just before leaving for Europe had the coccyx dislocated posteriorly. I have not seen her, but the physician who attended her tells me that it is firm and sticks out backwards. The patient is not young, very nervous, and she was confined with a very large child. I delivered her after she had suffered longer than she ought, by the forceps. I found some difficulty with the arm, which was down with the head, and in forcing back the arm I heard a loud crack so I presumed that the arm of the child was broken, but I found it was not. But the uterus did not contract properly, and as I was going away I asked Dr. Tuholske to look after the child. He examined the child and he could find nothing. The case puzzled me a good deal, and I asked him to examine it very thoroughly. He could detect absolutely nothing. The arm hung limp by the side of the child, but within a half hour was properly movable. Then I feared that the mother was injured, and now the doctor tells me that she has inconvenience on account of the position of the bone; it sticks out posteriorly and is firm, and in sitting down and getting up she is very likely to injure it. Now it strikes me that it would be questionable whether we ought to interfere in this case.

Dr. Gehrung.—I recollect a case of a man who had congenital displacement of the coccyx, and it caused him great inconvenience in sitting down and getting up, so the only thing to do in order to give him comfort was to remove it. I suppose that would be the only way to relieve the doctor's patient.

Dr. Prewitt.—I must confess that I do not see that in Dr. Gehrung's case the troubles to which he refers must necessarily follow. I do not see why the patient must necessarily have coccygodynia or irritable bladder or any of these troubles. I do not know whether the doctor has looked over the subject carefully or not. I have looked over it in a general way and I do not see that those things must necessarily follow. If the bone is loose at the articular attachment so that it moves readily, there is nothing there to cause a strain. I can understand how there may be considerable soreness and inflammatory trouble there, but why should there be anything more? Why should coccygodynia ensue or any particular trouble of the bladder? It does not seem to me that this would necessarily follow because the bone was looser than usual. If it were to become necessary to remove it, I think that would be very easy. Our experience in cases of rectal cancer shows that it can be done without ill results. One of the latest methods of dealing with cancer of the rectum is by removing the coccyx and gouging out the growth in that way. Then in regard to Dr. Engelmann's case, I think the bone should be broken off and put back in its normal position. This would be followed by some soreness and inconvenience, but no permanent injury of the bone would occur; and if it should be necessary to operate later, the bone could then be removed.

Dr. Engelmann.—I have not seen the case, but the statement is that it is firmly united, and the question is whether it could be broken from its abnormal attachments and fresh attachments formed in the proper place.

Dr. Prewitt.—I do not see why it should not with proper attention. It could be placed in the normal position and held with a T bandage. I would not hesitate to break up the attachments. I would break it up just as I would refracture a humerus if it had united in an abnormal position.

Dr. Engelmann.—It seems to me that the result of such an operation would be a little uncertain, and whether or not we operate should depend upon the wishes of the patient. If she is careful she can perhaps get along very well as she is.

Dr. Prewitt.—I don't think there would be any difficulty in the matter; you could put on a T bandage and certainly hold the bone in place.

VARICOSE VEINS OF VAGINA

Dr. G. A. Moses.—If there is nothing more to be said on that subject I will relate a case about which I was consulted by letter some three months ago. A lady was pregnant with her second child, she was about the fourth month when she noticed a swelling about the vulva. Upon examining her her attendant found what he took to be a varicose vein, and thought it would not amount to much. However, in the course of a little time she commenced to suffer pain and feeling of great discomfort, and upon examination he found upon the anterior and left portion of the vagina, extending from the vulva up to the cervix, numerous varicose veins which were tortuous and as large as a lead pencil, occupying a large portion of the vaginal wall. Pregnancy was going on normally, and her attendant was very much afraid that there would be serious difficulty at the time of the confinement. He consulted me by letter, and suggested that he would bring the patient down here, but before he did so one of the veins ruptured and there was profuse hemorrhage; he got some assistance and they attempted to ligate the vein, but the doctor thought the patient was going to die, and finally produced premature labor, which I had advised in case these things went on. She came to see me day before yesterday, and I found that the vagina looks normal and as healthy as any that I have ever seen. I have never heard of a case like it.

Dr. Engelmann.—I am sorry that Dr. Papin is not present tonight as he attended a lady in labor whom I treated afterwards gynecologically, and in that case the vagina was apparently healthy; yet she says she had a tumor there the size of a small apple and that was Dr. Papin's statement also, that there was an immense varicose vein in the vagina, but in that case it did not rupture until the confinement at term. When I saw her some years afterwards there was no trace of this unusual condition.

Dr. Gregory.—It seems to me that there should not have been much difficulty in controlling the hemorrhage. Usually compression is sufficient to arrest it, but if that failed a pair of forceps should have been used, and it seems to me the hemorrhage could have been controlled in that way.

ST. LOUIS MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, June 26, 1888, DR. HOMAN in the Chair.

KNEE-JOINT DISEASE.

Dr. Steele presented a patient with a splint for use in case of subacute knee-joint trouble. The most important factor in the successful treatment of knee-joint troubles due to inflammation is the utmost quietude of the part. He takes a plaster cast of the limb and fashions around it leather softened by immersion in water. This has, when dry, the greatest strength combined with lightness possible, being in the form of a tube. Bridges are constructed on that plan, a hollow column being stronger than a solid one. Last November the patient was injured in a rolling mill, the knee being caught between the tongue of a car on the one hand, and perhaps a bar of iron on the other. He continued to work a couple of days; on the second day the knee was painful, swollen and tender, and somewhat flexed. He has not worked since that time. The doctor whom he saw immediately advised quiet, and a liniment which he used five weeks. Then he found his way into the hospital. There the knee was tapped and immobilized with a plaster of Paris dressing; after keeping that on for three or four weeks it was removed. The swelling had subsided, the pain was relieved. He was told by the surgeon that he might use it. He used it one night and the next day it was worse than ever, swollen and painful. It has been getting no better since until recently, and now he has a subacute, almost chronic synovitis. Had the joint been kept perfectly quiet, there would probably have been a perfect joint to-day. It will be very difficult to cure now, because of the long continuance of the inflammation. The mistake made was in removing the plaster of Paris splint too soon. Had it been kept on six weeks longer, it is quite likely his knee would have got well. There is no constitutional taint; it is simple a local trouble and local treatment would have cured it. With this splint on, *Dr. Steele* thinks he will have a quiet joint. He has been using a compound iodine ointment and hot douche twice a day and rubber bandage. With the use of this splint he will probably be able to do some light work, not to go back to work in the rolling mill, of course. While in the hospital, after the Paris of plaster splint was re-

moved, they put on a pasteboard splint which he wore for 24 hours, when it broke. It requires a very strong splint to thoroughly immobilize the knee joint. Nothing will do it unless it encases the limb entirely. Plaster of Paris will do, but it is heavy and can not be removed. This splint will answer the purpose equally well, and it is light.

Dr. Nelson read a paper (vide July *COURIER*, p. 65) on

SYPHILIS AND MARRIAGE.

Dr. Todd remarked that so far from there being any symptoms of possibility of such legislation, public opinion is so debauched that even the intermarriage of deaf-mutes is considered a matter of congratulation. He had seen the statement in the papers that the intermarriage of congenital deaf-mutes in asylums should be encouraged, the sentiment being that these creatures needed that amount of mutual sympathy, and the impression seemed to be that it was a good thing.

Dr. Hardaway thought that *Dr. Nelson* and the author from whom he quotes had made some exceedingly broad statements and very unfortunate ones. In the first place, what does he mean by syphilis? Does he mean that syphilitics should not be allowed to marry with active syphilis? Is there a period of the disease at which this restriction shall cease, or must it be forever? He looks upon the statement that a man having syphilis must not be allowed to marry as sheer nonsense from a scientific stand-point.

The position among syphilographers on that question is about this. No conscientious man will allow a patient to marry while having active syphilis. Many a patient will come to the physician and try to persuade him that he is thoroughly well, that there are reasons, social and other, why the marriage should be allowed to marry within or during the period of active syphilis. Of course the medical man should be obdurate. On the other hand there is every reason to believe that after a time syphilis wears itself out. There are two points of view. In the first place we have every reason to believe that syphilis is a curable disease, it is not even necessary to use mercurials in order to cure it, syphilis is even self-limiting if the patient will only observe common sense, hygienic rules. Fournier considers that syphilis is not a bar to matrimony, provided active treatment has been carried out for a sufficient length of time, and perhaps even after a very inefficient sort of treatment,

provided a sufficient period has elapsed since the last appearance of the disease. You may take the others, Keyes, Bumstead and Taylor, Hill and Cooper, any number of the well known authorities on syphilis, and you will find that the statement is made, that after a certain period, as perhaps three, four or five years if you please, it is permissible for the patient to marry for two reasons, first, it is likely the syphilis has been cured, and, secondly, there is no reason to believe that the tertiary lesions are contagious or can be transmitted. In his opinion it would be as foolish as to say that a man who has had small-pox should not marry. One is an acute fever, the other chronic, but it would be opposed to all pathological reasoning to assume that syphilis never gets well. On the contrary, all who have had experience must have observed many cases where children have been born to a syphilitic person and the disease has not followed. Then we have on record, beyond all dispute, cases in which men have had syphilis a second time, such cases showing that the first case must have been cured. We consider that after three years syphilis is cured unless there are manifestations to the contrary. Even if tertiary symptoms follow, it is probable they will not be transmitted. Dr. Hardaway here quoted from a paper entitled: "The Limitation of the Contagious Stage of Syphilis," by Otis, in which he puts the limit at five years, and from another paper, a review which he himself made several years ago of Fournier's celebrated book on syphilis and marriage.

The quotations were as follows:

"Fournier says: The truth is that with some very rare exceptions, syphilis constitutes only a temporary bar to marriage.

"Bumstead and Taylor say: It may be stated in broad terms that no syphilitic father should procreate children until two years after infection, during which he should sedulously follow a systematic course of treatment.

"Keyes says; After the virulence of the disease has been exhausted, a man may marry and should marry. In a general way it may be safely said that a man should not marry until at least three good years lie between him and his chancre, and at least one has elapsed since the last symptom which can be ascribed to syphilis.

"Hill and Cooper: Under any circumstances, the shortest period between infection and marriage should be three years. * * * Under no circumstances should a person with obvious signs of

syphilitic disease marry, however long a time has elapsed since his infection, for, though communication is rare when several years (four or five) have elapsed, it may still take place after as many as ten or even more years, even when the form of disease is of the character commonly called tertiary.

"Prof. W. J. White (Pepper's System of Medicine) says: I have repeatedly given permission to marry or to resume marital relations after three years or three and a half of mild mercurial treatment, to which, during the last six months or a year, had been added iodide of potassium. In many instances healthy children have been born; in none, so far as I know, has the child or mother been directly infected. * * *

At the end, then, of from two to three years, if no symptom has been seen for six months or a year, treatment may be stopped and the patient kept under observation for a year; and if, during that time no symptom develops, he may consider himself as in all probability cured. * * *

There is evidence to prove, on the other hand, that this plan of treatment, rigidly carried out, results in the majority of cases, in curing the disease, or, at any rate, in putting the patient in such a condition that he may with safety marry, and may expect to have healthy children."

In the valuable work on Syphilis and Marriage, written by Alfred Fournier in 1880, for the purpose of justifying his statements, that "syphilis is but a temporary bar to marriage," he has presented a carefully tabulated report of cases, concerning which he says: "For my part alone, I have in my hands, to speak only of written facts, eighty-seven observations relative to syphilitic subjects, undoubtedly syphilitic, who, having married, have never communicated to their wives the least suspicious phenomenon; and, moreover, these 87 have produced among them a total of 156 absolutely healthy children." "In examining the tabulated records of these 87 cases I found that 36 out of this number of men who were thus proven to be free from any power to transmit syphilis, either by direct contact or heredity, were subjects of late or tertiary lesions after marriage, some before, and some after the birth of the children."

In conclusion Dr. Hardaway said that there is a widespread opinion among syphilographers that it is permissible after all these restrictions of treatment and time, of good habits, the observation of hygienic laws, etc., for such a man to marry. In a number of

instances in his own experience extending over 16 or 17 years, such cases had occurred repeatedly where he had allowed the patients to marry and they have had healthy children.

Dr. Todd asked if it is not true that tertiary symptoms can occur at any time during a man's life.

Dr. Hardaway said that may be so.

Dr. Todd said it was absolutely incredible to him, no matter what the most learned syphilographers may say, that a man with marked tertiary syphilis could beget a healthy child. If this is possible, what we know of biology is not worth knowing; if a diseased parent can beget a healthful child, as a rule.

Dr. Hardaway asked how it is possible for a man to have small-pox, and the disease occupy the whole system and that man have certain sequelæ of small-pox, certain chronic bone troubles, or any of the sequelæ that follow small pox, scarlet fever or measles, and yet beget healthy children.

Dr. Todd said if he has profound disease he doesn't think he will.

Dr. Hardaway said we look upon tertiary syphilis as a sequela of the disease, just as much as the sequelæ of small-pox, scarlet fever and measles are effects of these diseases; they are certain blemishes of the system which don't prevent the propagation of healthy children. These is this unfortunate fact in connection with syphilis, that we are apt to look upon it as different from anything else. Hutchinson did us a service in looking upon syphilis as a chronic exanthem and upon the tertiary lesions simply as the after results.

Dr. Barclay remarks that the tertiary stage of syphilis has been called by some the stage of lymphatic obstruction. There is undoubtedly in the primary and secondary stage a great deal of damage done to the lymphatic system. It has been a mooted question as to what the structure of the tertiary lesions is exactly; the protoplasmic material which is poured out is not taken back by the lymphatics at that time of life, owing to the lymphatic obstruction, and the obstruction causes the production of redundant tissue, sometimes in one form and sometimes in another, according to the part of the body in which the obstruction takes place. The lesions of tertiary syphilis are not the same in every part of the body. We know that the offspring of syphilitic patients are apt to have this lymphatic weakness all their lives. The tertiary stage seems to be

simply the stage of lymphatic obstruction, the result of the active damage done in the primary and secondary stages of the disease.

Dr. Boislaniere questions whether the marriage of syphilitics should be prevented by law. He opposes any regulation of this matter by law as an encroachment on the liberties of the people. In the third stage syphilis is no longer a constitutional disease. It is a diathesis. A diathesis is possibly transmissible, but not necessarily transmitted. The tubercular diathesis is not always transmitted; it may pass generations and never appear. Still there is such a thing as latent syphilis which may appear in four or five years. Of course no one should marry during the active stages of the disease.

Dr. Homan asked what is the present view as to etiology of syphilis; is it due to a micro-organism?

Dr. Hardaway said: We are completely in the dark as to that question. There is every reason to believe from analogy that syphilis is due to a micro-organism in the same sense that anthrax and lepra are. Whether these microbes are the essential causes of these diseases, he was not prepared to say. Although we have differentiated the bacillus of lepra it is impossible to say that the disease has been propagated by inoculation; so also in regard to the bacillus of tuberculosis.

Dr. Frank Glasgow said that had been settled.

Dr. Hardaway said it had not in leprosy.

Dr. Nelson thought it evident that he had succeeded in what he had in mind when he read the paper, namely, bringing about a discussion. This had been very noticeable all the way through: everybody had been very free to say what *may* be, but nobody had said what *would* be. He had stated what *may* be just as clearly, and recognized as distinctly as any gentleman who had spoken, the fact that syphilis often is cured. Nobody can deny that. He recognized that fact distinctly in his paper. He said there that a large proportion of syphilitics not only cease to have any manifestations themselves, but bear healthy children. He believes that the vast majority of men and women who have contracted syphilis and undergone anything like efficient treatment are cured of it; but he had not heard anyone take the negative of the position he advanced that no one can safely promise a syphilitic, no matter how thoroughly he has been treated, that he has certainly been cured of syphilis. Certainly if he contracts syphilis a second time he must have been

cured from the first attack, but none would advance this as an argument why he should be allowed to marry. Dr. Hardaway dwelt very strongly upon the point that the tertiary lesions of syphilis are not contagious, but it does not necessarily follow because the symptoms are not transmissible from one person to another by contact that therefore they are not transmissible to the child in utero. That is an entirely different thing. It may be true, and with regard to that he had to plead ignorance and lack of experience, that the tertiary symptoms of syphilis are simply sequelæ; but granted that they are, if any persons manifests distinct tertiary symptoms of syphilis, he would be afraid, in spite of everything that has been said, to advise him to marry. He could not understand how a man who is so saturated with any disease can propagate healthy children. He regarded the disease, syphilis, as a greater misfortune than never to have been born; that a man had better be dead than the victim of it.

Stated meeting Sept. 18, 1888, DR. TODD in the chair.

Dr. Funkhouser read a paper (vid p. 495) on

EXCISION OF THE JAW.

Dr. Funkhouser thought perhaps he had not laid sufficient stress upon the fact that the patient had suffered with this disease of the jaw bone for 31 years, claiming that for no longer than a month or six weeks was it either free from disease or healed over. Probably the original trouble did not depend upon this root of a tooth, but was an inflammation, the result of changes in the system due to the poison of the measles. Pieces of bone undoubtedly extruded from the alveolar process internally and also through this external opening. There was no history of salivation. The patient writes that he is now in excellent health. He had, perhaps, the strumous diathesis. Although he claimed that he was not weak, he was a frail looking man; there was no history of tuberculosis in his family. He was examined by several physicians and surgeons here, and if they suspected the presence of the root of tooth, they did not so express themselves, but stated that it was dead bone. After he had asked the patient if he thought all his tooth had been extracted it occurred to the doctor that it might be the tooth, but

even up to the time that he loosened it by means of the pliers it had not occurred to him that it was a retained tooth.

Dr. Frank Glasgow said he had never yet seen an operation of this kind for the removal of carious bone where the surgeon could be absolutely certain that all of it had been removed without removing live tissue. Many surgeons have a tendency to be too conservative and are apt not to remove enough. That is probably what occurred in this case. If these other surgeons had gone further and removed what they were doubtful about, the probability is that *Dr. Funkhouser* would never have seen the case, and the patient would have been cured long ago. Acids and escharotics would hardly cure such a trouble. We may destroy the germs in the dead bone, but that does not remove the dead bone, and the living bone is left in contact with it. The only way is to remove the portion of dead bone and get into the healthy tissue.

Dr. Grindon called attention to some recent experiments and work in bone surgery, the reformation of bone in the shaft of the humerus of a child, by implantation of bone grafts, not pieces of the periosteum, with a layer of osteogenetic cells, but small pieces of bone. The general practice has been when the probe shows that bone has been denuded of its periosteum and is rough, to consider it dead and to remove it at once, if detached. But in the light of recent experiments it may be that these pieces are not dead, and by being retained new bone may be produced; that a new formation may spring from these pieces, even if the periosteum and osteogenetic layer have been removed.

Dr. Fry suggested the possibility of building up the jaw in the case reported by plastic bone operations. The jaw being so frail, the man must be in constant danger of a fracture along the line where the bone has been partially destroyed.

Dr. Funkhouser did not consider it to be practicable. The man understands that his jaw bone is weak, and that he must not attempt to crack nuts, or bite anything hard with it, as it might produce a fracture. In 1859 *Dr. James R. Wood*, of New York, reported a case of reproduction of a lower jaw entirely, or at least, on one side, from periosteum and perhaps a part of the bone—that is the first instance on record in which anything like the reproduction of bone, especially the lower jaw, is recorded. It would seem unwise, even if this man was strong and healthy, as long as he can get along with artificial teeth, to attempt anything of that sort.

Dr. Frank Glasgow suggested active exercise to increase the bone.

Dr. Grindon recalled a case in an insane patient in the female department of the poor house. She had an immense osteo-sarcoma of the lower jaw, which grew very fast, projecting considerably. *Dr. Prewitt* chiseled away the diseased bone so that there was only a little strip of bone left, and remarked that he supposed that little strip of bone would be absorbed, but that the ends would come together and make a pretty good jaw. When he last saw the patient the bone had not been absorbed, but grew harder all the time. Whether it was very dense connective tissue deposit or bone he could not tell, but the little strip of bone got thicker and stronger.

Stated Meeting October 30, 1888.

LOCAL TUBERCULOSIS.

Dr. Tuholske reported the following cases of local tuberculosis:

About a year ago a negress, some 22 or 23 years of age, called at the Polyclinic with a sore breast. It had been variously diagnosed as a benign and a malignant tumor, but it presented somewhat the following characteristics: It was probably twice the size of the normal breast, and presented upon both sides, external and internal aspect very firm, nodular, hard columns almost meeting in the centre which was of a softer, obscurely fluctuating character. The temperature of this breast was somewhat higher than that of the other breast, being about 100° , varying from a few tenths below to a few tenths above. The woman was emaciated, thin, delicate. Her mother was suffering from carcinoma of the breast that had progressed so far as to make it impossible to remove the tumor. It had infiltrated the glands in the axilla and become fastened to the thoracic walls from the clavicle down to the eighth rib, and showed secondary deposits in other parts. There was no possibility of doing anything for her.

When the patient presented herself to me, the swelling had existed for nine months. The first impression that I got in examining the breast was that I was dealing with some tumor of which a part had undergone cystic degeneration. However, on a careful examination, and finding a central fluctuating mass reaching

deeply down through the breast wall and beyond it, with apparently no connection with the firm, hard lateral columns that I described, I came to the conclusion that it was probably an abscess, and occupied with that idea I incised it and there was evacuated a large quantity of flocculent, thin, sanious pus. She did not remember having received an injury, and did not remember exactly the origin of the trouble, but recollected simply that her breast had been rather painful, not exquisitely so, and that the hardening progressed with the general enlargement of the breast. We laid the breast open thoroughly, washed it out, scraped it with a curette, and drained it at the most dependent portion and administered internally the iodide of mercury. After the removal of the fluid from the breast the woman seemed to be very much relieved; her temperature became normal; her appetite increased. She was so very thin that her chest presented the appearance of one with consumption, but a careful examination of her chest physically showed no signs of any involvement of the lung. For some weeks the cavity appeared to get smaller, and it did actually get smaller, and it seemed as if the healing process was being established. That proved erroneous, however. After a little while there were found, some on one side and some on the other, little fluctuating fossæ which were opened and small quantities of pus evacuated. All were treated by scraping them thoroughly along the fistulous tracts and injecting iodoform and sulphuric ether. We then lost sight of her for several months, and when she returned there were a dozen fistulous tracts all through the breast, and the hardened masses were somewhat decreased in size. The fistulous tracts could be followed back in the mamma deeper apparently than the pectoralis major. During all the time the patient was under our care she did not gain any flesh. An examination under the microscope of some of this cheesy mass showed tubercle bacilli. I was then thoroughly satisfied that it would be utterly impossible to so control the involved territory by injections or scrapings as to destroy the disease, and I thought the better plan would be to make an incision below her breast, raising the breast off the chest wall and inspecting the territory there to get at the amount of danger that had been done. I did that, making an incision under her breast and encircling the lower half of it, I raised the breast and found everywhere behind the mamma, the same ulcerating process under the skin in the subcutaneous tissue. Cut-

ting into the mass itself, as I did in a number of places that did not show upon the surface at all, I found blind sinuses, their openings or beginnings apparently being upon the fascia of the pectoralis major. I then removed all of the breast, and removed far and wide every tubercular focus presenting itself until I had laid bare upon the right side of the chest probably about one third of the chest wall. I then continued the incision into the axilla and removed the glands that were enlarged there, all of them showing the same condition of fungus inflammation. I managed to get a flap from the upper anterior portion of the breast which partially covered the defect, made by the removal of the breast which I sewed in place at the most dependent portion and got perfect union. Some weeks after, at the upper angle of the wound there was a return of the same fungus trouble. I had evidently left some focus there in the operation, and the same trouble commenced to crop out again. Laying it open thoroughly and scraping it and filling in the part with iodoform overcame the trouble and perfect healing took place. From that time on, the woman gained in flesh, and had no more febrile disturbance at all and got to be a well woman. I report this case because I find only seven cases of primary tuberculosis of the breast reported and operated on, and while in the beginning we did not make the diagnosis of tuberculosis, we did of central abscess. The diagnosis was made upon the discovery of the tubercle bacillus, and the operation was performed before any of the internal structures were involved. There is probably no doubt that if the trouble had continued the woman would have succumbed to a general tuberculosis.

The next case is one not quite so rare, one which I operated on to-day; it is that of a tubercular testicle, perhaps I ought not to say tubercular testicle, because it was only a tubercular epididymis, and only the globus minor was involved. The case occurred in a boy 17 years of age, of a general build and appearance which seemed to be the very birthplace for the development of tuberculosis; he was a pale, freckled, red-headed, blue eyed boy; very thin, poorly nourished. Glandular enlargement was noticed everywhere about the neck and in the groin. At the lower end of the left testicle there presented a little fistulous opening, at the globus minor, which had penetrated through the and showed a fistulous tract into the epididymis. The pus that had escaped from the epididymis was examined by Dr. Stevens, and afterward by Drs. Riesmeyer

and Dixon and all of them found the tubercle bacillus. The case did not look at all bad; the epididymis was not larger than a very small walnut; the opening not larger than would admit the end of a good-sized probe. I explained to the boy and his family the likelihood of a tubercular general involvement from the primary focus, and they readily agreed to the removal of the testis, and I removed all his testicle, thinking it would be useless without the epididymis, and probably a bad thing to leave it without the epididymis since on secreting the semen there would be no way for it to get out, since the whole globus minor would be destroyed and it might be a source of irritation to him. The operation is one of the earliest that I know of being performed for tubercular trouble of the epididymis. I did it on the principle that it was unquestionably a tubercular trouble, tubercle bacilli having been found and demonstrated. I had no hesitancy in performing the operation, being convinced of the diagnosis, and believing firmly that it would be a good thing. I have no doubt he will make a quick recovery. We know that even if the fistulous tract were to contract and the surface cicatrize there would still remain a certain amount of cheesy matter in the interior putting the testicle to great disadvantage, and that from this local tubercular trouble a general attack might result; the prostate, bladder, vesicula seminalis and kidneys may become involved in the tubercular disease and the patient succumb to general tuberculosis. I would say furthermore, so far as local tubercular lesions are concerned, that I have made it a practice to remove all glands in the neck in young children which are in a state of cheesy inflammation and suppuration, the breaking down of the glandular structure, also in the glands in the groin which frequently break down after specific local lesion. We have done so in a large number of cases. I think our records show probably fifty cases in which we have removed from the groin handfuls of changed lymphatic glands and numbers of them from the neck. I remember distinctly a young girl of 12, a very puny, thin, delicate girl, one of those whom you would expect to begin to cough and have chest trouble. We found a number of enlarged glands in the axilla, one of which had been suppurating. On cutting into it we found a cheesy mass. I scraped it out and healing took place. But it did not last long, some irritation relighted or rekindled the trouble, suppuration was again established; again the glands in the neighborhood took part it, and I found a chain of glands starting from

the axilla and running down the side of the chest under the pectoral muscle down to the 9th rib, enlarged; those in the axilla were as large as a good-sized chestnuts, gradually getting smaller until the lower ones were the size of hazel nuts. In this case I split open the whole side in order to get at them and removed them all, and got union by first intention in all except the one that was situated high up in the axilla.

Dr. Hardaway.—Dr. Tuholske's remarks remind me of a statement in Niemeyer's Practice of Medicine, written probably 20 years ago in which he states that he believed it would be a legitimate operation some day to take out degenerated lymphatic glands for tubercular trouble.

Dr. Homan.—I have had occasion within the past year to study the subject of tuberculosis and tubercular infection, particularly local tuberculosis. It seems to me from the authorities which have come under my notice that every structure in the body and of both sexes, except the uterus is subject to tuberculosis. I have seen no mention made of a case of tuberculosis of the uterus. I have inquired of several gynecologists, but have not heard of a case of tuberculosis of the uterus. I do not see why it should not be quite as liable to be infected as some of the other organs. I would like to ask Dr. Tuholske if he has ever met with a case of tuberculosis of the womb?

Dr. Tuholske.—No sir.

Dr. Ameiss.—I have not seen any, but I think Martini has demonstrated the tubercle bacillus in the uterus.

Dr. Homan.—Has he found them in the structure of the uterus?

Dr. Ameiss.—In the cavity of the uterus.

A COURSE IN BACTERIOLOGY, for physicians, consisting of descriptive lectures accompanied by demonstrations of pure cultures, microscopic preparations, and the methods of bacteriological investigation will be given by Dr. W. N. Beggs in the Bacteriological Laboratory of the St. Louis Medical College, Monday and Thursday evenings, 8 to 10 P. M., from December 3rd, 1888, to February 25th, 1889, inclusive.

The fee for the course will be five dollars, payable in advance.

COMMUNICATIONS.

THE ARKANSAS LITHIA SPRING.

POPLAR BLUFF, Mo., Nov. 6, 1888.

EDITOR COURIER.—While on a visit to the South Arkansas Fair, held recently at Hope, Hempstead County, I went out to see the Arkansas Lithia Spring, about five miles south of the town. It is the most remarkable water I ever saw. The spring breaks out from the side of a hill, is five feet deep, and presents the appearance of a pool of dilute tincture of iodine or old rye-whisky. It has a slightly sweetish taste and sulphurous odor. I got a copy of an analysis by Prof. Harding, of Virginia, which I give. An imperial gallon contains:

Chloride of Sodium,	-	-	-	24.164
“ “ Lithium,	-	-	-	3.638
“ “ Potassium,	-	-	-	.415
“ “ Magnesium,	-	-	-	4.366
Sulphate of Calcium,	-	-	-	14.572
“ “ Magnesium,	-	-	-	11.977
“ “ Strontium,	-	-	-	1.767
Borate of Magnesium,	-	-	-	.095
Nitrate of Ammonium,	-	-	-	1.184
Oxide of Iron,	-	-	-	4.564
Alumina,	-	-	-	1.017
Silica,	-	-	-	4.053
Organic and Volatile, etc.,	-	-	-	4.064

This is certainly a very wonderful combination, conspicuous for the large proportion of most of the ingredients—How comes this color?

Supposing it might proceed from some peat or concealed rotten wood, I had all the water dipped out the reservoir, but found nothing of the sort. The top-soil was sandy, the subsoil red clay, and the vein of water issued from a stratum of dark-brown iron ore: the

land above and around it, is what is called an old field. The spring is inclosed with a fence to protect it from the intrusions of stock that come in numbers to drink from the branch below. It has a local reputation, and is used as a cure for every ailment by the country people who take it to their homes in jugs and kegs. It is considered a specific for kidney troubles, and I can vouch for its diuretic properties. Certainly Arkansas is fertile in mineral and other resources and must in the near future take a deservedly high place in the rank of our states.

I hope this communication will meet the eye of some doctor more familiar with analytical chemistry than your humble correspondent.

R. H. J.

ABATTOIRS.—At a meeting of the Australian Health Society a Mr. Service, who has traveled extensively, stated that the best abattoirs are found in Germany and the worst in Chicago. "He said that in Berlin and Munich the abattoirs are kept so clean and tidy that any person could sleep on the premises without experiencing any discomfort. The yards are all carefully paved in order to prevent the retention of any offensive matter, and the method of drainage is perfection. In Berlin they go so far as to practice the esthetic by the growth of flowering creepers against the wall. He caused much laughter over his description of the Chicago "pork mill". He said that while in the United States, he accompanied a party of men and women on a visit to large abattoirs and a manufacturing establishment in Chicago. It was utterly impossible to approach the yards on foot, the approaches being of the most filthy character, and the yards were in the most unsatisfactory condition; it was in one of those institutions in which a pig went in alive at one end and came out tinned pork at the other. Such was the condition of things about the establishment that the women in the party said that they would not eat tinned meat again. The question was asked him how they treated the blood at the German abattoirs. This he did not remember, though he saw its importance, as the German sausage is essentially a blood sausage: but he said that after what he had seen at Munich and Berlin he was not afraid to eat any thing German.—*Med. and Surg. Reporter.*

SELECTIONS.

RELIGIO MEDICI.

Dr. Wm. T. Gairdner, president of the British Medical Association at the recent meeting in Glasgow, Scotland, took as the subject of the annual address "The Physician as a Naturalist." He shows that from the earliest ages there was a more or less distinctly expressed feeling or tradition that the practitioner of medicine was a student of Nature, the trace of this thought coming down to us in the word *physician*. He follows out the thought historically, and emphasizes the necessity of early training in physics and natural science. He closes the admirable address with some thoughts under the heading "Religio Medici," in which he touches upon the relation of the physician to things spiritual, giving, as he expresses it, "the matured convictions of a lifetime on a theme which must needs come home to every man's conscience in the exercise of our profession."

He pays a beautiful tribute to the character of Charles Darwin in whom he says, "we have, if his character is carefully and charitably studied, a man of the very stuff and moral fibre of which the most eminent saints are made."

The closing paragraphs of the address are so forcible and beautiful that we cite them in full:

"But if (as I am most ready to admit) the life and work of the great modern apostle of evolution tends towards the belief that science in these days, and especially the study of natural phenomena in the organic world, make, on the whole, rather for the weakening and dissolution than for the building up of religion, then it will surely be the part of the physician of the future to act as the mediator between the destructive and the constructive influences. Although he can never again become what he was in the early ages, the sole or the chief representation of physical science, he must always be, and must become more and more, a man trained in

its discipline and familiar with its resources, while, on the other hand, his close relations with suffering humanity, and with the awful and solemnizing ministrations of life and death, will serve to keep him in a region apart from that of pure science, and one in which, from day to day, the voices from the unseen world (if he will only listen) will be ever sounding close to his ears. It is not for me, here and now, to show how this work of conciliation is likely to be undertaken or to be accomplished, but that it must needs be undertaken, and that it will ultimately be accomplished, no one can, I think, doubt who has not allowed himself to become, as Darwin puts it, "color-blind" to the higher spiritual influences. And in this work of conciliation the Bible will assuredly hold its own as the great spiritual guide of humanity, and as an inexhaustible treasury of spiritual wisdom, if it be studied according to the meaning of its own simple word and not according to the glasses that have been placed upon these by innumerable generations of contending theologians.

The physician of the future will, I believe, be much more, instead of less, inclined to make his study of the Bible than hitherto. * * * But he will study it in the spirit of modern scientific freedom and of historical research, not under the influence of mere tradition and ecclesiastical authority. And thus only, as it seems to me, can the reconciliation of science and religion ever be brought about.

In the address I had the honor to deliver last year in Dublin, I reproduced a sentence from one more than 20 years old, in which I had said as regards our own historical position at that time (but only in reference to the healing art). "The day of orthodoxies is over; the day of real science is only just dawning." The whole course of that address as well as of the one which preceded it was directed toward the demonstration of the enormous evils that have accrued to humanity and to the medical art from a blind reliance upon the tradition of the ages, and often upon traditions wrongly interpreted. "It is so hard," writes our humorous and venerable *confrere* across the Atlantic, Oliver Windell Holmes, "to get anything out of the dead hand of medical tradition. The mortmain of theorists extinct in science clings as close as that of ecclesiastics defunct in law." The abuses of blood letting, of a senseless and obstructive polypharmacy, and of innumerable so-called remedies, either inert or positively mischievous, which have had to be

cleared out of the way before medical science and practice could even begin to be reasonably, simple and intelligible, have been a lesson to all of us, I trust, as to this dead hand of medical tradition." How can we, of all men, fail to see that the same kind of mortmain, precisely the same or similar dead scholastic orthodoxies have locked up the living words of the New Testament, and of our Lord Jesus Christ himself, in formulas around which the dust of ages has accumulated, till the dead letter has well nigh choked out the living and life giving spirit of Christianity. The beautiful story of a divine life and death, the miracles of healing, the sermon on the mount, the parable of the prodigal son, with its ever fresh lesson of the fatherhood of God; that of the good Samaritan, with its large sense of human brotherhood, are conspicuous by their absence as principles from those creeds of the church which profess to be the formulated essence of Christian doctrine; and instead of these we have the controversies of the first four centuries marred and scarred all over with the traces of very human, very bitter, and often sanguinary conflicts; the scrambles for power of this or that bishop, "lording it over the heritage" in opposition to the very words of St. Peter, and giving to all time an example, not of the "peace and good-will" with which the first Christmas Day was ushered in, but rather of the sad prophecy "not peace, but a sword" which only too truly foreshadowed the ecclesiastical as opposed to the Christian *regime*.

The physician of the future will do well if he remembers always the pernicious despotism which has been exercised over his own art (though in a minor degree) by the fetters of these dead orthodoxies, and will therefore be very slow to acknowledge their claims upon him to any more than a historical regard, even in the realm of theology. He will say of them, in the noble words of the Westminster Confession, which but for the formula connected with it in our Scottish churches might almost be taken as the magna charta of Christian liberty in all such documents. "All synods and councils since the Apostles' times, whether general or particular may err, and many have erred; therefore they are not to be made the rule of faith or practice, but to be used as an help in both." But I desire you very specially to remark as my own personal anticipation, shared, I have no doubt, by many of those now present, that the physician in his character of student of nature, will make, and in the end will establish this claim to emancipation,

much less, atheistic, tendencies, but for the very reason that he has access to a revelation of God distinct from the written revelation, and requiring a wholly distinct method of investigation. In obedience to this call he will sooner or later absolutely decline to walk in the leading strings of ecclesiastical tradition. And in so doing he will (far from fulfilling old Dan Chaucer's satirical description) studiously insist upon the Bible, and especially the New Testament, and above all, the recorded life, words, and works of our Lord himself, as containing by implication, the charter of his emancipation, and the only perfectly free religious atmosphere as yet opened to human thought and inquiry. In proof of which I will now only submit one pregnant saying, with which, if it be indeed the word of God, all those who believe it to be such are bound to find all the other words of God in entire accord:

"Henceforth I call you not bond-servants; for the bond-servant knoweth not what his lord doeth; but I have called you friends; for all things that I have heard of my father I have made known unto you." Jno. xv. 15.—*Brit. Med. Jour.*

ALBUMINURIA AND LIFE INSURANCE.

Prof. Tyson whose work on Examination of Urine is so generally and favorably known, read before the Association of American Physicians at the last meeting a paper on the Relation of Albuminuria to Life Assurance, of which the conclusions are as follows:

First. It is scarcely necessary to say that the applicant must in all other respects present the signs of good health.

Second. The albuminuria should be unaccompanied by tube casts. However perfect may appear the health of an applicant with albuminuria, the presence of casts in his urine must effectually close the gates of life insurance against him. Casts and albumin conjoined can receive only one interpretation—structural changes in the kidney either acute or chronic. Here, however, let me say I have known men with good medical education say that casts were passed in a given specimen when there were none; certain granular aggregations have been mistaken for them.

Third. If the quantity of albumin is large, the applicant should be rejected irrespective of the presence of casts. The term large

albuminuria admits, of course, of considerable latitude in its application; but I should say that an albuminuria is large in which the albumin habitually exceeds one-fifth the bulk of the specimen examined.

Fourth. A consideration which goes far toward establishing the functional character of an albuminuria, although not essential to this end, is the absence of albumin on rising in the morning. Nor dare it, of course, be said that such an albuminuria precludes the existence of organic disease. It must be taken in connection with the other considerations mentioned.

A *fifth* point of importance is specific gravity, meaning thereby the specific gravity of the 24 hours' urine, or what my friend Dr. Charles W. Purdy, of Chicago, calls the "real" specific gravity. The specific gravity of any portion of the 24 hours' urine, or the "apparent" specific gravity is of limited value, varying greatly with the time of day and relation to meals. If we regard the specific gravity of a normal 24 hours' urine (say 50 oz.) as 1.020, the following may be laid down: albuminuria is least significant when the specific gravity is high, throwing out, of course, the consideration of sugar. The specific gravity is a direct measure of the solids, which in health are strikingly constant for each 24 hours, while the same is true in a less degree of the watery part of the secretion. Hence, the specific gravity of the 24 hours' urine is tolerably constant. In all forms of renal disease the solids are diminished; and in all except acute nephritis and cyanotic induration the specific gravity is lowered. In these two it is lowered because in them the quantity of urine is also markedly less, and, in consequence, the specific gravity is increased to 1.028 and even higher. In acute nephritis the presence of blood may also contribute to such specific gravity. Strictly speaking, acute nephritis may be ignored, because no one ill of it is likely ever to apply for life insurance. In functional albuminuria the specific gravity remains normal. Dr. Purdy even says that his observations in many of these cases show a specific gravity above the normal standard, reaching 1.022 to 1.030.

Whenever, therefore, in addition to the absence of other symptoms and signs alluded to, the "real" specific gravity is above 1.020, another most important fact is in evidence against the presence of organic disease, and in favor of the view that albuminuria is functional. On the other hand, if the real specific

gravity of the urine be 1.012, 1.010, 1.008, or even less, as it sometimes is, it would be hazardous to accept such a case of albuminuria, however good may be the apparent health of the applicant and even in the absence of casts. To judge unfavorably from the specific gravity of any portion of the 24 hours would be exceedingly unfair to the candidate.

Sixth. The signs of hypertrophy of the left ventricle and of high vascular tension associated with albuminuria are conclusive symptoms of renal disease, and should exclude the candidate. High vascular tension may sometimes be shown to exist by the sphygmograph, even when not appreciable to the touch.

Seventh. A highly important consideration is the age of the candidate. Albuminuria is much less apt to be of the functional kind in persons over 40 years of age than in those who are younger, especially between the age of 21 and 35. It is questionable whether any person with seemingly functional albuminuria who had reached the age of 40 should be accepted unless he has been long under the observation of a competent and conscientious observer.

Eighth. The presence of true gout in any shape precludes admission to life insurance, because gout is always sooner or later followed by interstitial nephritis.

Finally. The retinal symptoms so commonly associated with chronic Bright's disease, although usually late in their appearance, do sometimes form the earliest noted sign of this affection, and whether or not conjoined with albuminuria must effectually exclude the candidate from its advantages.

These, in brief, are the conditions which, if observed, appear to me to enable one to establish conclusively the functional character of an albuminuria, the presence of which should not exclude a candidate from life insurance. They might have been elaborated, but I prefer to leave them to be discussed as presented. It is to be remembered, however, that observations should extend over a considerable period of time, also that there is reasonable doubt as to whether the requisite knowledge and training are sufficiently general to secure intelligent recognition of the conditions. Take, for example, so simple a matter as examining for tube casts, which may be regarded as almost the easiest sort of microscopical work. Yet, how few medical examiners are competent to make such examinations. Most of them have no microscopes, and many who

have them use them so rarely that their opinion whether positive or negative as to the presence of casts cannot be relied upon. On the other hand, there are those who are competent to apply these conditions, and it is reasonable to suppose that this number will gradually increase.

I conclude, therefore, that life insurance associations should recognize a condition of functional albuminuria out of consideration of their own interest, as well as in justice to a class which is coming to be recognized as more numerous as our knowledge increases, and who are blindly excluded from benefits to which they are entitled.—*Med News*.

SUGGESTIONS FOR A FERTILIZER ENTERPRISE.

A correspondent wishes to be referred to some work treating on the conversion of night soil, etc., to fertilizer. We cannot hear of any—except the *Sanitary Era*. Before the general introduction of water closets in the city of New York, the “Poudrette Company” manufactured fertilizing powder from the night soil of the city; but their works were long since deserted and in ruins. Some such manufacture it is, we are told, that renders almost intolerable the passage across the Hackensack flats, from Jersey City or Hoboken to Newark. To carry on this manufacture profitably for commercial purposes, as our correspondent proposes, would require a considerable capital; although the true method is much simpler and nicer than any of the ways pursued by manufacturers. It has been repeatedly set forth in this journal, and its general features can be learned from our files. Where sewage is concerned, the method used at Vassar College, and described by us some time since, is immensely better, in principle, process and product, than any other we have heard of in Europe or America. (It is substantially the “West” system.)

If we were called on to dispose of the sewage and night soil of a city (as most cities have both,) we should lay out a sufficient acreage of sheds, underdrained, and with strainer floors somewhat raised. We should procure from the surface of the country enough good soil to cover these floors six or eight inches deep, and screen it. (The proper depth would still be subject to experience; as

many other details must be.) Probably it would be profitable—possibly necessary for damp or freezing weather at least—to provide steam blowers, or other means of draft, to force dry air continuously through the floors and the masses of soil spread upon them, after saturation.

The sewage would be ejected upon the layer of soil as long as the effluent continued to drain off from it clear; and the persistence of this clearness would long continue to astonish the natives wherever the works might be. (We could then put it through Hyatt filters and give it back to the people to drink, a much finer water than they are, probably, accustomed to. But there might be esthetic objection to this; although there seems to be none to drinking the sewage itself, in dilution.) When the effluent began to be dirty, the sewage would be shut off from that shed, the soil loosened up by a mechanical provision for the purpose, and the sunshine and draft of dry air sent through it until the absorbed water should be evaporated; when it would be ready again, and better than before, for repeating the process. It would be a better defecator and absorbent every time this was done, to an indefinite number of times. If a limit should be reached at length, the whole mass would be worth say \$80 a ton as fertilizer. These are facts of experience on a smaller scale.

If the sewage were first filtered by Mr. Hyatt's process, the manufacture would be brought within much smaller compass and less cost, exactly as by the following method for night soil.

For the night soil, the same apparatus would be used as for sewage, only dividing the layer of dry earth into two or three layers, and spreading the night soil between them, to lie undisturbed until entirely absorbed and assimilated by the earth, and the whole dried, when the round would be repeated; once in three or four weeks.

But, it is asked, do we not want a certain proportion of coal dust, ashes, gypsum, lime, phosphates, marl, salt, etc.? No! none of these things are half as good as the simple soil, that nature provides, and uses herself. Or, rather, all these things and more are abundant in the soil and in the organic matter of sewage, and thus grow more and more ample for the purposes of universal defecation and fertilization, the more the organic matter is mixed with the soil. Why, don't you know that this is only a continuation of the same process by which soil was first created in the inert detritus

of the rocks, that we call sand? The primary part of the process, performed in the pre-Adamite ages by the ferns and the mud monsters, is too slow for us, and therefore we do not go back to sand and alkali if we understand what we are about. The fertile soil of the human age will do more defecation and assimilation in a fortnight, than sand would, probably, do in a century.

Not but that thorough science may discover and supply deficiencies, and so facilitate the process and improve the product. But nothing more is essential, or certain to be useful, than good soil. Ashes and lime, in particular, are more liable to do harm than good, in the long run, and are never safe but in very small proportions. Not salt can ever be wanted. Carbon is unequivocally good, if not expensive. Marl and clay, according to the soil, would also be useful, in proper proportions. A good chemist would be among the most useful of all, until the process became scientifically perfect as adapted to conditions.

Our friend could try this plan, of course on a small scale, without much outlay, and gradually increase it, if encouraged by a market among the farmers; since he enjoys the ready-made advantage of an open sewer running past his front door.—*Sanitary Era*.

PRESERVATION OF WATER SUPPLIES.

The costly and dangerous waste of city water needs to be constantly impressed upon the public. A part of the public will be impressed and led to act conscientiously, or at least prudently in the matter, by considering the inconvenience of deficient pressure in the house pipes, and above all, the danger of slack water at the fire hydrants, on which the fate even of a city might not improbably sometime depend. But a very large proportion of those who waste water are of a sort impenetrable to considerations of public safety, or indeed to considerations of any kind beyond their own momentary convenience. This kind of people abound in all classes, and must be educated to respect the rights of others by constraining measures. The only way to teach them that the water belongs to the public, and that they have a right to use only their individual share of it, is to make them pay for the excess that they waste under penalty of having their water, like their gas in a like case, shut off. Of course, this involves the mainte-

nance of water meters, like gas meters, in every house. The unpopularity of the measure is, as we have seen, the very reason for its necessity. It is a proof of the unwillingness of people, even "respectable" people, to be restrained from robbing the public.

The city of New York suffers in every building it contains, from a deficient water supply. Notwithstanding the large and swift river of water that pours through the city, night and day, the discharge of it is so wasteful that in comparatively few buildings can water be had above the first floor, and usually the basement is the height of the supply in the day time. In very cold weather the running of water all night to keep it from freezing, reduces the supply to a point of danger in case of fire. The condition of Brooklyn is vastly worse. The next consequence of the waste is an enormous increase of city debt and taxation for water-work extension. Thus the cost comes at last on the wasters, in part, only they don't generally know it. The city ought to require every owner of a building to maintain a water meter in it, and if necessary, a meter for every tenant. The readings should be regularly taken, and every gallon over a liberal standard for each individual should be charged to the owner of the building at a fair price addition to the regular water rate. Owners should then be justified in shutting off water from incorrigibly wasteful tenants, until their excess is balanced by privation or payment.

But waste of water becomes still more injurious in towns so situated, as a majority are, that gravity cannot be employed for a head of water. and therefore pumping is made an unavoidable addition to the cost. Probably there are few towns in the United States, having water works, where the citizens are not taxed thousands of dollars to pay for pumping water for the thoughtless and unconscionable to throw away wantonly or use extravagantly. So highly respected a gentleman as General W. T. Sherman was reported, a few years since, to have quarrelled with the authorities of St. Louis for imposing conditions on his unlimited use of city water to irrigate his grounds. General Sherman's services certainly deserve all the free water he can use during his natural life; but very few of those who practically claim this high privilege have ever done anything to earn it.

The Water Commissioners of Schenectady, in their report last November, estimated the direct cost of unnecessary pumpage due to wanton waste, at over \$2,000 for the year. The city Water

Commissioners of Madison, Wis., say in their late report, that as soon as cold weather set in, the waste from night flowing increased the pumpage twenty-five per cent, and at the same time reduced the pressure to a dangerous minimum during two fires; these were fortunately extinguished, but not until suction was lost, and no water could be had on the following morning for ordinary use throughout the city. If householders themselves had to pay the expense of keeping their pipes from freezing, they would find a cheaper way than this.

All the sanitary importance that can be attached to an abundant supply of water for the whole people, belongs, by the same argument, to the best means for restricting the waste of the people's water by selfish or inconsiderate individuals.—*Sanitary Era*.

THE EXFILTRATION OF BACTERIA.

The Prophylactic, while admitting that water is now successfully filtered of impure ingredients, adds that "it is not known, however, that the typhoid or other pathogenic bacteria can be removed by infiltration. Indeed, even if these organizations can be so removed, it is not at all probable that their spores—'seed' or 'eggs'—can be removed by any filtering process yet known." From this remark, we should judge that the editor of that excellent sanitary periodical had scarcely given due attention and credit to the investigations of biologists in England and America, on this very point. The recent comparative reports on water before and after passing through the Hyatt process, by Prof. Kedzie, of the Michigan State University, and Prof. Long, of the Chicago Medical College, concur independently and very emphatically as to the total disappearance of bacteria of all sorts, spores and all, that were profusely abundant in the same water before coagulant filtration. It should be remembered that these tests are made by culture, in close sterilized flasks, with every precaution for unadulterated results, and under such conditions that neither bacteria nor spores, if present, could fail to develop in the nutrient medium supplied. In the unfiltered water they did abundantly develop; but in the filtered water the biologists could not, with all their skill and leisure, elicit a symptom of organic life, in its action on gelatine, or to microscopic examination.

We presume that it is not suspected, much less known, that pathogenic bacteria differ at all from other bacteria in susceptibility to infiltration. Further, if we mistake not, the distinction between spores and bacteria is that of different kinds, and not of different stages of development; both the egg-shaped and the rod-shaped microbes multiplying by fission, with the same form perpetually reproduced.

It is a curious notion, too, that some sanitarians seem to have, who express discouragement about freeing water from pathogenic germs, because we are unable as yet surely to distinguish them; as if the wholesale expulsion of all germs would not be satisfactory, unless the miscreant species were particularly and separately kicked out by name.

NOTES AND ITEMS.

THE MEDICAL JOURNAL AND LIBRARY ASSOCIATION OF THE MISSISSIPPI VALLEY held its annual meeting Nov. 18. Reports of officers showed the association to be prosperous. Election resulted as follows: President, Dr. F. R. Fry; Secretary and Treasurer, Dr. A. J. Steele; Executive Committee, Drs. W. A. Hardaway, H. W. Hermann, and G. J. Engelmann.

Six new members were elected.

At a meeting of the executive committee held Nov. 12, Dr. E. M. Nelson was appointed editor of the *COURIER* for the ensuing year, 1889, in conjunction with Dr. C. A. Todd, D. C. Gamble, and L. T. Stevens. The following were appointed Corresponding Editors, Drs. G. N. Kreider, Willis P. King, W. C. Chapman, and B. St. Geo. Tucker.

Collaborators.—Drs. F. R. Fry, and H. W. Hermann, Diseases of the Nervous System; H. N. Spencer, Otology; A. J. Steele, Orthopedics and Joint Diseases; F. C. Ameiss, Gynecology; F. R. Eversole, Genito Urinary Diseases; W. N. Beggs, Medical Microscopy; W. T. Porter, Diseases of the Throat and Physiology; J. B. Keeber, Dermatology; L. T. Riesmeyer, Surgery; Wolfner, Ophthalmology.

MEDICAL NEWS VISITING LIST for 1889. With the closing of the year we look forward to the new one. One of the necessary preparations for the new year for the physician is to provide himself with a suitable visiting list.

No handsomer or more convenient book of this class is offered to the profession than is published by Lea Brothers & Co. Admirable judgment has been used in the compilation of the text, and in arranging the blanks for records, while the mechanical part of its preparation is unsurpassed. We heartily commend it to our readers. It is supplied in three forms arranged for 30 patients weekly or for 120 patients monthly or "perpetual" (undated).

DR. HENRY B. SANDS, of New York City, died suddenly in his carriage while returning from a professional visit, Sunday afternoon, Nov. 18. He was fifty-eight years of age, and had been in practice since 1854, when he graduated from the College of Physicians and Surgeons. In 1857 he was appointed Demonstrator of Anatomy, and later, Professor of Anatomy in his alma mater. About ten years ago he was elected to the chair of Surgery with Dr. Markoe as his colleague. He was a superior anatomist, a brilliant and successful surgeon.

PHYSICIAN'S VISITING LIST. (Lindsay and Blakiston's) for 1889. Thirth-Eighth Year of its Publication, Philadelphia: P. Blakeston, Son & Co.

This visiting list is so well known, and has been so long used by great numbers of the profession that thousands look upon it as an old friend. It is convenient in size, well arranged, and contains valuable matter for reference in cases of emergency.

It is prepared in several forms adapted to 25, 50, 75 or 100 patients weekly, in one or two volumes and also an interleaved edition. Prices vary from \$1.00 to \$3.00.

MEDICAL CHIPS is the new name of the journal which was known last year as the *International Medical and Surgical Synopsis*. It is a 30 page monthly and is apparently the organ of the College of Physicians and Surgeons of this city.

THE BOYLSTON PRIZE of four hundred and fifty dollars has been awarded to Dr. G. H. T. Nuttall, of San Francisco. The title of the essay is "A Contribution to the Study of Immunity."

MILWAUKEE is adopting garbage cremation.

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JONES, M. D., M. D., St. Louis.

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KREIDER, GEO. N., M. D. Spring-
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Louis.
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SHIPMAN, ALFRED, M. D., Platts-
mouth, Neb.
STEELE, A. J., M. D., St. Louis.
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TODD, C. A., M. D., St. Louis.
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